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BRONCHOGENIC CARCINOMA — PREDISPOSING CAUSES*

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ANCER OF THE LUNG is increasing more than any other cancer in the body in men and is the most frequent visceral cancer at the present time. In 1920, cancer of the lung represented 1.1 per cent of all cancers in the United States; in 1930, 2.2 per cent of all cancers, and at the present time, 10 per cent of all cancers. Because it is increasing rapidly, it is my belief that unless something is done to prevent it, approximately twenty-five years hence cancer of the lung will represent 30 per cent of all cancers. This is approximately the condition that exists in England today, where in 1931 it represented 5 per cent and in 1952, 26 per cent of all cancer deaths. Also in England, in 1950,9 10 per cent of all the deaths in men between the ages of forty-five and fifty-five (the most productive years of a man's life) were the result of cancer of the lung. There was a thirty-eight-fold increase in the incidence of cancer of the lung in England²⁴ from 1920 to 1954. In Holland, 19 from 1924 to 1951 lung cancer increased tenfold in women and twenty-four fold in men. In Switzerland,14 it increased thirtytwo fold from 1900 to 1952, during which time the population increased only 1.4 fold, all deaths 0.8 fold, and all cancers, 1.9 fold. In Finland, 18 lung cancer increased approximately 7 per cent each year from 1936 to 1943, after which the annual increase became approximately 13 per cent. The per capita consumption of tobacco has been higher in Finland since the early 1900's than in any other European country. In Austria, lung cancer represented 1.6 per cent of all cancers in 1920, 2.2 per cent in 1930, and 10 per cent in 1956. Clemmesen^{5a} stated that in Copenhagen in the period 1985-1990 lung cancer deaths in men will equal those from all

cancers in 1950. He⁵ also referred to the incidence of bronchogenic carcinoma as being pandemic and warned that unless young persons are prevented from acquiring smoking habits, a major catastrophe in medical history will be unavoidable. The Norwegian government is so convinced of the causal relationship between smoking and lung cancer that they forbid the sale of tobacco to minors, and 0.1 per cent of the government's tobacco revenue is allocated for research on the deleterious effects of tobacco.2 In Massachusetts29 cancer of the lung has now become the most frequent cancer and even supersedes cancer of the breast. Levin²² reported that in New York State from 1931 to 1950, cancer of the lung in males increased 385 per cent, whereas cancer in all other sites increased only 2 per cent. In females during the same period of time, there was an increase of 68 per cent in cancer of the lung and a decrease of 15 per cent in cancer in all other

Many authorities maintain that cancer of the lung has not increased but is being recognized at the present time, whereas previously it was misdiagnosed as some other lesion. We are convinced that this is not a correct assumption and that cancer of the lung is in reality a new disease. Clemmesen,⁵ who is an eminent pathologist in Denmark and who has been extremely interested in the epidemiology of cancer for a number of years, is convinced from his study of the Cancer Registry in Denmark that the increased incidence of cancer of the lung is real and not relative. In discussing the remarkable increase in the incidence of cancer of the lung, Clemmesen stated: "It seems impossible to escape the conclusion that from the studies reported we are now facing the beginning of one of the major catastrophes in medical history, a mortal disease which demands decades for its development and probably as lengthy efforts for its prevention." Another reason I am convinced that the incidence in bronchogenic cancer is actual and not relative because of better diagnosis is that in the Germanic countries, such as Germany, Denmark, and Holland, where, since the time of Virchow, autopsies continued on next page

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have been done almost routinely for the past one hundred years, the incidence of bronchogenic cancer has increased as it has here. It is inconceivable that the carefully trained German pathologist would have missed bronchogenic cancer if he saw it at autopsy twenty-five years ago. Wegelin32 reported a progressive increase in the incidence of lung cancer, as determined at autopsy in the Berne Pathological Institute, from 2.5 per 100,000 autopsies in the period 1900-1904 to 14.2 in the period 1935-1939. Also Matz²³ found the incidence of bronchogenic carcinoma to all carcinoma as determined by autopsy in the Veterans Bureau Hospitals in the United States increased from 6.4 per cent for the period 1927 to 1931 to 15.8 per cent for 1932-1937 and to 23.4 per cent for the year 1937. O'Neal and his co-workers26 found that the incidence at Barnes Hospital in St. Louis increased from 1.1 per cent of all autopsies in 1910-1919 to 4.2 per cent in 1930-1939 and to 7.8 per cent in 1945-1954.

Lung Cancer Behavior Different

Whereas all cancers increase generally with advancing age and are usually considered degenerative diseases, cancer of the lung behaves differently. The incidence of all other cancers increases with advancing age, that is, of all the persons ninety vears of age, a greater percentage will have cancer than those eighty, of those eighty years of age, a greater percentage will have cancer than those seventy, and so on. The one exception is cancer of the lung which increases very sharply to reach a peak age of approximately fifty-five, following which, with advancing age, there is a decrease in the incidence. Cancer of the lung is the only form of cancer which behaves in this way and which does not increase with advancing age. This lack of conformity in bronchogenic cancer is that persons who have subjected their heart and blood vessels to the deleterious effects of tobacco over a number of years are likely to develop fatal coronary artery disease and not live long enough to develop cancer of the lung.

For at least twenty years, I have been convinced that there is a causal relationship between smoking and cancer of the lung, although originally my reasons were very tenuous and were based upon a parallelism between the incidence of cancer of the lung and the consumption of cigarettes and also because cancer of the lung was extremely unusual in the nonsmoker. Many others have also become convinced of the causal relationship. Clemmesen believes that the tremendous increase in the incidence of cancer of the lung in Denmark is due to cigarette smoking. Delarue, in France, is equally convinced of the causal relationship between smoking and cancer. He stated: "The evidence to support this thesis is sufficiently definite that cigarette

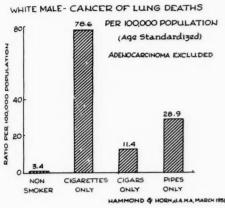
manufacturers now have a moral obligation to attempt to prove or disprove its validity and to eradicate any carcinogenic agent from their product when and if it is isolated." Doll and Hill10 in England stated: "At about the age of forty-five, the risk of developing the disease (bronchogenic cancer) increases in simple proportion to the amount smoked, and it is approximately fifty times as great among those who smoked twenty-five or more cigarettes a day as among nonsmokers." Levin22 stated: "The weight of evidence, therefore, indicates the relationship between cigarette smoking and lung cancer is causal and not merely an association." He further stated: "From the practical standpoint, we believe there is already enough evidence incriminating cigarette smoking to justify advising the public that the available evidence is consistent with the view that cigarette smoking is one of the causative factors in lung cancer and that stopping cigarette smoking may, therefore, be a means of lowering the incidence of lung cancer."

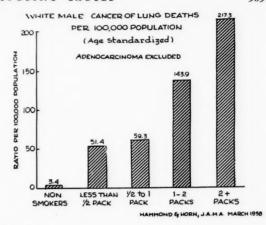
Until the middle 1930's, the incidence of bronchogenic cancer in both sexes was practically the same. At about this time, however, there was a tremendous increase in the incidence of the disease in males, which, undoubtedly, was due to the fact that during World War I (1914-1918) men began smoking cigarettes excessively and the length of time between 1914 and the middle 1930's was sufficiently long for the carcinogenic effect of smoking to become evident. There was some increase in the incidence of cancer of the lung in women during this same period of time, but much less than in men because even today men use cigarettes much more than women. According to the United States Health Report, in 1956, 67% of the nonsmokers in the United States were women and only 33% were men.

Many persons are unwilling to admit that there is a causal relationship between smoking and lung cancer, but in my experience these individuals are, without exception, either in the employ of the tobacco industry or are addicted to eigarette smoking themselves. In both instances, it would be difficult for the individual to admit a causal relationship.

British Experience

It has often been stated that the reason the incidence of cancer of the lung is higher in London than in the United States is because of the smog in London. This might be true were it not for the fact that in Denmark, immediately across the English Channel, where the incidence of cancer of the lung and the per capita consumption of cigarettes are practically identical with that in London, there is no smog. Also, in Pittsburgh, which until relatively recently had had smog for approximately one hundred years, cancer of the lung is less frequent than in New Orleans. Those who would have





FIGURES 1 and 2

us believe that the increased incidence of cancer of the lung is due to smog fail to explain why a similar increase has not occurred in women as in men, because certainly women breathe the same air as men. A study by Stocks and Campbell³⁰ suggests, however, that air contamination may act as an additive factor to smoking in causing lung cancer.

It is frequently stated that because we in the United States smoke more than the British and because the incidence of lung cancer is less here than in England, there can be no causal relationship between smoking and cancer. Although it is true that the incidence of cancer of the lung is higher in England than it is in the United States and also that Americans smoke more than the British, this is only a half-truth because, although we consume more cigarettes than the British, we have done so for approximately only nine years. Prior to that time, the British smoked much more than we, and they are now paying the price for their very heavy smoking for the past twenty-five years. It is frightening to envision what will happen to us in the next fifteen or twenty years when our smoking habits catch up with us.

For many years it has been obvious to thoracic surgeons that the incidence of heavy cigarette smokers among patients with carcinoma of the lung is much higher than that among the average general hospital population. Wynder and Graham, 33, 33a from a study of their patients with lung cancer, stated that excessive and prolonged smoking was an important factor in the production of bronchogenic cancer. Watson³¹ found that 37 per cent of lung cancer patients in the Memorial Hospital and only 19 per cent without cancer of the lung were heavy smokers. Schrek and his associates²⁸ stated: "The positive correlation between the incidence of cigarette smoking and the incidence of cancer of the respiratory tract appears to be statistically and

biologically significant. There is strong circumstantial evidence that cigarette smoking was an etiologic factor in cancer of the respiratory tract."

Statistical Studies Offer Evidence

Many persons object to drawing conclusions on such retrospective statistics, and because of such objections, several years ago the American Cancer Society undertook a prospective statistical study to determine the incidence of bronchogenic cancer among smokers as contrasted with that among nonsmokers. 16a This consisted of an annual interview of approximately two hundred thousand men between the ages of fifty and seventy concerning their smoking habits. The study was continued for five years. The final analysis of this study showed that the death rates from lung cancer were dependent upon the smoking habits of the individuals and varied according to the amount smoked. The death rate in heavy cigarette smokers was 800 per cent higher than in nonsmokers! (Fig. 3.) The study further showed that the risk of bronchogenic cancer decreased if one discontinued smoking and that the longer the time elapsed since discontinuance, the less the risk, but that risk was greater in the heavy smokers than in those who smoked moderately (Figure 4).

A completely independent, but similar prospective statistical study, was made by the Veterans Administration and reported to the Seventh International Cancer Congress by Dorn. 11 This study also showed that the incidence of lung cancer varied according to smoking habits and that the more cigarettes smoked, the greater the incidence of the disease. Doll and Hill. 10c in a similar study of the physicians in England, obtained comparable results. The standardized annual death rates from the lung cancer per one hundred thousand men thirtyfive years of age and older were nonsmokers, 7;

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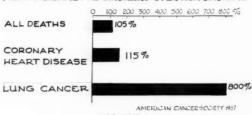


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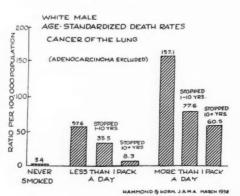
pipe smokers, 38; pipe and cigarette smokers, 68, and cigarette smokers, 125. They also found that the incidence varied with the amount smoked as follows: nonsmokers, 7; smokers of one to fourteen cigarettes daily, 47; fifteen to twenty-four cigarettes daily, 87, and twenty-five or more cigarettes daily, 166. The study further showed that the incidence decreased if smoking was discontinued and the longer the time elapsed, the greater the decrease. In an editorial in the British Medical Journal, 12 commenting on the Doll and Hill study, the following statement was made: "The weight of evidence of smoking as a causal connection with lung cancer, already sufficient to convince an unbiased observer, has been greatly increased by the latest reports of Doll and Hill. The new evidence makes it far more than ever imperative that the public is repeatedly informed of the possible dangers of health and life from smoking cigarettes." The above mentioned statistical studies were on men, but in women there is also a relationship between the amount smoked and the incidence of lung cancer as demonstrated by Haenszel and Shimkin's study¹⁷ (Figure 5).

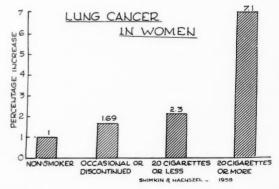
For many years, it was stated that there could be no causal relationship between smoking and cancer of the lung, because precancerous lesions were not found in the tracheobronchial tree. Several years ago, Costilow, while a senior medical student at Tulane University, made observations on men coming to autopsy and showed that the changes in

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the bron; hial mucosa varied according to the smoking habits, that older persons who do not smoke have a normal appearing mucous membrane, that moderate smokers have metaplastic changes in the bronchial mucosa, and that heavy smokers have definite precancerous changes. These preliminary observations have been corroborated and substantiated much more conclusively by Auerbach and his associates, and Chang, who demonstrated that changes occur in the bronchial mucosa, ranging from hyperplasia, metaplasia, precancerous lesions, early invasive cancer, to extensive cancer, depending upon the amount smoked.

Doctor Evarts Graham, who did more to advance the rational treatment of bronchogenic cancer than anyone else in the world, originally was of the opinion that there was no causal relationship between smoking and cancer of the lung. He believed that the parallelism between the consumption of cigarettes and the incidence of cancer of the lung was purely coincidental. He later became convinced. however, that there was a causal relationship and the experimental investigations by him, Wynder, and Croninger^{33,33a} showed without any question or doubt that there is a cancer-producing agent in the smoke from cigarettes. They used a robot machine which smoked sixty-four cigarettes at a time in the same manner that human beings smoke, in that every sixty seconds a drag of two seconds was taken. The cigarette smoke was collected and cooled. A tarred residue was obtained, which, when added to a solvent, was applied to the skin of animals three times a week. At the end of two years, 44 per cent of the animals developed a cancer at the site of the application of the tar and the solvent. This cancer was identical with that in human beings in that it metastasized and killed the animals. In a control group of animals to which only the solvent was applied three times a week in an exactly similar manner as in the experimental group, not one animal developed, at the end of two years, either a





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FIGURES 4 and 5

benign or a malignant tumor at the site of the application of the solvent. In 1943, Roffo²⁷ produced cancer in animals by applying tobacco tar to the skin of the animals. Cooper and Lindsey6 found in the smoke obtained from cigarettes a number of polycyclic hydrocarbons, particularly 3:4 benzpyrene and 1:12 benzoperlene, both of which are carcinogenic. Similarly, Latarjet and his coworkers²⁰ found 3:4 benzpyrene in the smoke from cigarettes and showed that this carcinogenic agent was present both in the cigarette paper and the tobacco. Essenberg and his associates 13 were able to produce bronchogenic neoplasms by subjecting animals to cigarette smoke. Leuchtenberger and associates²¹ showed that in mice subjected to cigarette smoke there were changes in the bronchi that varied from bronchitis with mild proliferative epithelial changes to those with atypical basal hyperplasia, squamous cell hyperplasia, and even carcinoma in situ.

Many persons state that one cannot compare animal cancer with human cancer and that for this reason Wynder and Graham's work is of no value. No attempt was made to compare animal cancer with human cancer. The work simply proved without any question or doubt that there is a cancerproducing agent in smoke from cigarettes. It is well known that cancer of the lung is increasing more than any other cancer and that it parallels the consumption of cigarettes. The annual per capita consumption of cigarettes in the United States in all persons fifteen years of age and older has increased from 16 in 1880 to 3,556 in 1953! However, it did decrease in 1956 to 3,195. These facts together with the proved fact that there is a carcinogen in the smoke from cigarettes leads to the only logical conclusion: There is a causal relationship between the two.

Casual Relationships Questioned

In spite of all this evidence, some persons still will not accept the fact that there is a causal relationship between smoking and cancer. In commenting upon this attitude, Graham¹⁵ remarked: "To satisfy the most obdurate of the diehards, it would be necessary to take the following steps: (1) Secure some human volunteers willing to have a bronchus painted with cigarette tar, perhaps through a bronchial fistula. (2) The experiment must be carried out for at least twenty to twentyfive years. (3) The subjects must spend the whole period in air-conditioned quarters, never leaving for more than an hour or so, in order that there may be no contamination by a polluted atmosphere. (4) At the end of twenty-five years they must submit to an operation or an autopsy to determine the results of the experiment." Clemmesen⁵ succinctly stated: "The academic proof of the carcinogenic

quality of tobacco smoke claimed so eagerly for all but academic reasons may, therefore, be produced by removal of the suspected agent from 50 per cent of the agent previously exposed, followed by the disappearance, complete or partial, of the disease from the same 50 per cent." He further stated: "It is true that we have no guarantee of the effects until we know the chemical nature of the carcinogen or further experiments are carried out, but we cannot wait while men are dying by the thousands. Where were the guarantees in combat against the epidemics of the past? Let no one believe that the attitude of the public will remain indifferent to us in our responsibility when in one or two decades extension of the catastrophe will become apparent to everyone."

The fact that there are patients with cancer of the lung who have not been smokers is frequently advanced as proof that smoking has no relationship to cancer. Almost without exception, such an individual has an adenocarcinoma, and the American Cancer Society studies16, 16a have shown that there is no relationship between smoking and the incidence of adenocarcinoma. I have been so convinced of the causal relationship between smoking and cancer that, for the past five years, I have contended that an individual who does not smoke, but who has a pulmonary lesion which might be bronchogenic cancer either has adenocarcinoma or does not have a malignant disease. In the five years I have been wrong only twice. There is no other diagnostic criterion which is as nearly so accurate as this one, and I believe the history of smoking is of extreme

importance diagnostically.

Approximately two years ago, the American Cancer Society, the American Heart Association, the National Cancer Institute, and the National Heart Institute1 (the latter two are agencies of the Federal government) appointed a committee of seven scientists to study and evaluate all the available data regarding the effects of smoking on health. These scientists were chosen because of their integrity and ability to analyze critically experimental and clinical investigations. After an intensive study of one year, they concluded: "The sum total of scientific evidence establishes beyond reasonable doubt that cigarette smoking is a causative factor in the rapidly increasing incidence of human epidermoid carcinoma of the lung." No statement could be more definite and conclusive than this. This was the conclusion arrived at by an independent group of eminent scientists appointed by four prominent health organizations, both private and governmental. Their exhaustive and impartial study and analysis of all evidence available make the acceptance of the causal relationship of cigarette smoking to lung cancer virtually mandatory.

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The Medical Research Council of Great Britain,25 a government agency, recently drew the following conclusions after extensive investigations over a period of five years, "Evidence from many investigations in different countries indicates that a major part of the increase (of lung cancer) is associated with tobacco smoking, particularly in the form of cigarettes. In the opinion of the Council, the most reasonable interpretation of this evidence is that the relationship is one of direct cause and effect. The identification of several carcinogenic substances in tobacco smoke provides a rational basis for such causal relationship." The British government also has posted in all public places large yellow posters with the following inscription:

"To all Smokers! There are now the strongest reasons to believe that smokers-particularly of cigarettes-run a greater risk of lung cancer than nonsmokers. The more cigarettes consumed, the greater the risk."

The fact that an agency of the British government, which receives such enormous income from tobacco taxes, would make this unqualified statement to its people has great significance for us and for the health agencies of our Federal government.

The question is no longer whether bronchogenic cancer is caused by cigarette smoking, but what will be done to remove the carcinogen in tobacco. At present there are no available methods and until such are developed, it behooves all cigarette smokers to refrain from smoking completely and to have a chest roentgenogram every six months so that when precancerous changes in the bronchial mucosa progress so far as to be non-reversible, the resultant malignant lesion can be detected at a time while it is resectable and curable.

BIBLIOGRAPHY

¹American Cancer Society, American Heart Institute, National Cancer Institute and National Heart Institute: Report of Study Group on Smoking and Health. New York Times, March 23, 1957

²Antitobacco campaign: J.A.M.A. (Foreign Letters)

168:1151-1152 (Oct. 25) 1958

³Auerbach, O.; Petrick, T. G.; Stout, A. P.; Statsinger, A. L.; Muehsam, G. E.; Forman, J. B., and Gere, J. B.: The anatomical approach to the study of smoking and bronchogenic carcinoma. A preliminary report of fortyone cases. Cancer, 9:78-83 (Jan.-Feb.) 1956

⁴Chang, S. G.: Microscopic properties of whole mounts and sections of human bronchial epithelium of smokers and non-smokers. Cancer, 10:1246-1262, 1957.

⁵Clemmesen, J.: Bronchial carcinoma: A pandemic. Danish M. Bull., 1:37-45, 1954

5aClemmesen, J.: On the endemiology of bronchial car-

cinoma. Acta chir. Scandinav., 111:238-239, 1956 6Cooper, R. L., and Lindsey, A. J.: 3:4 Benzpyrene and other polycyclic hydrocarbons in cigarette smoke. Brit. J. Cancer, 9:304-309, 1955

⁷Costilow, M.: Cited by Ochsner, A.; Ray, C. J., and Acree, P. W.: Cancer of the lung: A review of experiences with 1457 cases of bronchogenic carcinoma. Am.

Rev. Tuberc., 70:763-783 (Nov.) 1954

8Delarue, N. C.: Bronchogenic carcinoma: The present challenge. S. Clin. North America, pp. 911-929 (Aug.) 1954

Doll, R.: Bronchial carcinoma: Incidence and aetiology Med. World, 80:370-391 (April) 1954

10 Doll, R., and Hill, A. B.: Smoking and cancer of the lung: Preliminary report. Brit. M. J., 2:739-748 (Sept.) 1950

10a Idem: A study of the aetiology of carcinoma of the lung.

Brit, M. J., 2:1271-1286, 1952

10bIdem: The mortality of doctors in relation to their smoking habits: A preliminary report. Brit. M. J., 1:1451-1455, 1954

10cIdem: Lung cancer and other causes of death in relation to smoking: A second report on the mortality of British doctors. Brit. M. J., 2:1071-1081, 1956

¹¹Dorn, H. B.: Tobacco consumption and mortality from cancer and other diseases. Presented before the 7th Int. Cancer Congress, London, July 8, 1958

¹²Editorial: Brit. M. J., 2:1071-1081 (Nov. 10) 1956 ¹³Essenberg, J. M.; Leavitt, A. M., and Gaffney, E.: A possible carcinogenic agent in cigarettes. Proc. Am. A. Cancer Research, 2:14-15, 1955

14Gsell, O.: Tobak und Krebs: Klinische und statische Erhebung, mit besondere. Berichsictigung der Schweiz. Oncologia (Gasel) 10:157-186, 1957

15Graham, E. A.: Remarks on the etiology of bronchogenic carcinoma. Bull. Am. Coll. Surg., 40:128-133 (March-April) 1955

¹⁶Hammond, E. C., and Horn, D.: The relationship between human smoking habits and death rates. J.A.M.A., 155:1316-1328 (August 7) 1954

16a Hammond, E. C., and Horn, D.: Smoking and death rates. Report on forty-four months of follow-up of 187,787 men. J.A.M.A., 166:1159-1172 and 1294-1308, 1958

17 Haenszel, W.; Shimkin, M. B., and Mantel, N.: A retrospective study of lung cancer in women. J. Nat. Cancer Inst., 21:825-842, 1958

¹⁸Holsti, L. R., and Ermala, T.: Tupakka ja syoepae. II Klüninen ja patologinen aineiste. Duodecim, 71:1115-1134, 1955

19Korteweg, R.: The fight against lung cancer. Documenta de Med. Geograph. et Trop., 5:168-172 (June) 1953

20 Latarjet, R.; Cusin, J.; Hubert-Habart, M.; Muel, B., and Royer, R.: Détection quantitative du 3, 4 benzopyrene formé par combustion du papier à cigarettes et du tabac. Bull. du Cancer, 43:180-198, 1956

²¹Leuchtenberger, R., and Doolin, P. F.: A correlated histological, cytological and cytochemical study of the tracheobronchial tree in lungs of mice exposed to cigarette smoke. Cancer, 11:490-506, 1958

²²Levin, M. L.: Etiology of lung cancer: Present status. New York State J. Med., 54:769-777, 1954

22a Levin, M. L.; Kraus, A. S.; Goldbert, I. D., and Gerhardt, P. R.: Problems in the study of occupation and smoking in relation to lung cancer. Cancer, 8:932-936, 1955

²³Matz, P. B.: Incidence of primary bronchogenic carcinoma. J.A.M.A., 111:2086-2092 (Dec. 3) 1938

²⁴McKenzie, Alan: The diagnosis of cancer of the lung and stomach. Brit. M. J., 2:204-207 (July 28) 1956

²⁵Medical Research Council of Great Britain: Tobacco smoking and cancer of the lung: The increase in lung cancer. Brit. M. J., 1:1523-1524 (June 29) 1957

26O'Neal, R. M.; Lee, K. T., and Edwards, D. L.: Bronchogenic carcinoma. An evaluation from autopsy data, with special reference to incidence-sex ratio, histologic type, and accuracy of clinical diagnosis. Cancer, 10:1031-1036,

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THE SURGICAL APPROACH TO IMPROVEMENT IN HEARING*

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 $T_{
m age.}$ It occurs of course in infancy as well as in the elderly and middle ages, and may occur as a result of inheritance, or it may be acquired as a result of conductive or perceptive loss during any age. We are concerned now with the surgical approaches for the correction of these defects whenever possible, hoping to improve the opportunities for better hearing through judicious use of surgery in and about the ear.

As you have heard from Doctor Gammell, the removal of obstructing hypertrophied lymphoid tissue in and about the eustachian tubes has been a fundamental surgical procedure in the correction of some of the catarrhal conditions of deafness, and he has told you of the therapy which involves the application of radium or X ray to accomplish shrinkage of the obstruction. Incision of the drum and aspiration of the contents of the middle ear which is inflamed or fluid-filled is likewise a fundamental approach. We take for granted that in an acute, a subacute and a chronic mastoiditis, surgery is helpful in restoring temporarily suppressed hearing. We will but mention briefly the fenestration operation which was so brilliantly conceived by Julius Lempert, Gunner Holmgren, and Sourdille and which has taken its place in the firmament of progress in surgery. This remains a very useful procedure and will continue to be used for the correction of hearing defects due to otosclerosis. Today, we want to tell you something of the correction of this same disease by a method called Stapes Mobilization.

About five years ago, Doctor Rosen in New York brought about a renascence of the mobilization of the stapes when its footplate is fixed to the oval window by the disease otosclerosis. This disease occurs in early childhood occasionally, and in the aged fairly often, but most frequently is seen in the twenty, thirty or forty decades. Pathologically, it *Presented at the 148th Annual Meeting of the Rhode Island Medical Society, at Providence, Rhode Island, May 13, 1959.

occurs as a local excrescence in the oval window, usually at either end of the footplate of the stapes, causing suppression of vibration and thus impairment of hearing. This causes the patients to complain of a confusion of sounds when in groups of people, many of whom may be talking at once; also there is difficulty in hearing in church or the theater and in advanced cases, of course, in ordinary conversation. There is usually a family history of hearing impairment and almost always a history of tinnitus. Sometimes in noisy surroundings, the patient seems to hear better because the people around him are talking louder and carrying their voices more directly to the individual. With the very advanced cases the hearing impairment, as a result of disuse of nerve tissue, presumably causes a diminishing reserve of hearing within the so-called bone conduction or nerve transmission of sound. Then, as noted on the audiogram, the differential between the air and the bone conduction becomes lessened. When the audiogram shows an adequate air-bone gap and a reasonably flat depression of hearing in one or both ears and with a history as outlined above, it is advisable to do an exploration of the middle ear for the purpose of restoring hearing if it is feasible. The physical examination reveals usually a very clean ear canal without cerumen, a transparent membrana tympani due to atrophy of the superficial layer of epithelium and through this a very pink promontory of the cochlea. Audiograms reveal a flat depression of hearing, beginning with a more severe attack in one ear, and usually followed by a suppression in the other ear within a matter of months or

The operation consists in making a flap of the posterior membranous canal wall, elevating it forward to the annulus, and elevating the posterior half of the drum forward, to expose the middle ear. A small segment of bone is taken out to expose the incudostapedial joint, the crura, and the footplate of the stapes. It is at this point that the pathology may be recognized and evaluated. The surgical procedure chosen varies from this point on, depending on the amount of pathology present and its location. With a simple excrescence at the anterior crus, a simple transmission of vibration through the incus or through the head of the stapes, or by manipulating the posterior crus of the stapes, may break up

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and dislocate the pathology so that the footplate can again transmit vibration to the inner ear. If, however, pathology exists at both ends of the footplate, it is sometimes necessary to divide or remove a small segment of the anterior crus and to do the manipulation through the posterior crus alone. If both of these are so fixed, then breaking up of the footplate by microscopic picks and chisels may bring about motion in the footplate; and if all of these fail, the footplate may be removed entirely and a vein graft applied to cover the labyrinth at the point of exposure. Then a small segment of polyethylene tubing is attached to the incus and carried down into the oval window to hold the vein graft in place. This restores hearing, because it allows vibration to be transmitted again into the labyrinth. These are a few of the procedures which are feasible and which bring about an almost immediate restoration of hearing. The operation is done with only a very minute amount of local anesthesia in the ear canal; during the procedure conversation can be carried on with the patient on the table. Auditory measurements are taken during the operation and at the completion of the procedure, to measure improvement in hearing. This is later compared with the pre-operative status.

The most attractive aspect of this particular operation is that it hospitalizes the patient only about two days and sometimes even less, and then he or she is up and about at home and back to work within a very few days. There are no sutures and there is little or no dressing other than a cotton ball, although this of course is varied with the individual surgeon.

There are complications. The possibility of refixation of the footplate may occur and if this is so, the patient will return for a new appraisal. The operation, incidentally, may be repeated and perhaps more successfully than at the first instance, or a new approach may be made by a direct attack on the footplate. If at the conclusion of all this there is still failure, but with the proper indications for operation still holding, the fenestration procedure may take place and bring about a more successful and complete correction of the defect.

Age plays a small part in this procedure, since the operation may be done during childhood, in middle age, or even in the elderly. Otologists throughout the country are utilizing this operation many times as a preliminary to the fenestration, since through a fairly simple means the desired end result may be brought about without subjecting the patient to the more formidable fenestration procedure. Results up to about seventy per cent improvement are being obtained, with perhaps a twenty per cent loss following the first three months, and on those re-operated, a satisfactory gain in the restored hearing of about ten per cent.

This opens up a new field for restoration of hearing in people with chronic middle ear disease.

Transfer of skin grafts to close perforations in the middle ear, and the use of prostheses are all feasible; they are being used largely in this country and in Europe. Doctors Zollner and Wullstein have

pioneered much of this work in Germany,

This work is made possible through the use of the operating microscope, a very fine Zeiss instrument on a floor standard which is swung into position over the patient and gives magnification of six, ten, sixteen, twenty-five or forty diameters. Needless to say, this opens up the middle ear into a brand new operative field. The new instruments which are being produced every day are legion and all of them are useful. Some of course become obsolete before the week is out, but we are always prepared for the newer techniques with newer instruments.

In conclusion, this Stapes Mobilization operation which is now approximatly five years old, has brought back hearing to literally thousands of people who have had little or no help because they have shied away from the more formidable operation of fenestration. It is serving a very useful purpose, and while not perfect in its application has brought relief to many people.

BRONCHOGENIC CARCINOMA – PREDISPOSING CAUSES

concluded from page 512

²⁷Roffo, A. H.: Carcinoma del pulmon experimental por alquitrán tobaquíco. Cancer experimental, Bol. Inst. de Med. exper. para el estud. y trat. d. cancer, 20:103-122, 1943

²⁸Schrek, R.: Baker, L. A.: Ballard, G. P., and Dolgoff, S.: Tobacco smoking as an etiologic factor in disease: I. Cancer. Cancer Research, 10:49-57, 1950

²⁹Sosman, Merrill C.: Personal communication

³⁰Stocks, P., and Campbell, J. M.: Lung cancer death rates among non-smokers, pipe and cigarette smokers: An evaluation in relation to benzpyrene and other substances. Brit. M. J., 2:923-929, 1955

³¹Watson, W. L.: Cancer of the lung: Consideration of incidence and etiology. New York Med., 6:15-18; 40 (June 20) 1950

³²Wegelin, C.: Der Bronchial and Lungenkrebs. Schweiz. med. Wchnschr., 72:1053-1063, 1942

³³Wynder, E. L.; Graham, E. A., and Croninger, A. B.: Experimental production of carcinoma with cigarette tar. Cancer Research, 13:855-864 (Dec.) 1953

33nIdem: Experimental production of carcinoma with cigarette tar. II. Tests with different mouse strains. Cancer Research, 15:445-448, 1955

Note: Some of the charts graphically illustrating statistics mentioned in this paper have been omitted for reasons of brevity.

... THE EDITORS

BUTLER HEALTH CENTER —

FIRST FULL YEAR OF OPERATION*

ROBERT W. HYDE, M.D.

The Author. Robert W. Hyde, M.D., Superintendent, Butler Health Center, Providence, Rhode Island.

Last year the Rhode Island Medical Journal published Butler Health Center — Today, in which the reopening of Butler Hospital as Butler Health Center was described. We have now completed our first calendar year of full operation and it seems appropriate to describe what has occurred during this first year. This is particularly true because of the wide interest and support the Center has had from the medical profession of Rhode Island, the other citizens of this state, the U.S. Public Health Service and the American Psychiatric Association.

Another reason for such a report is the fact that Butler Health Center represents a model of modern trends in psychiatric practice. The plan for opening was based on a study made by a committee from the American Psychiatric Association and it was sponsored in many ways by the U.S. Public Health Service and the Department of Health, Education and Welfare. These trends, briefly stated, consist of application of the newly acquired armamentarium of treatment methods. These methods are founded on (1) recognition of the complex family and community circumstances involved in mental illness and 2) direction of treatment to the total situation rather than to the patient alone. These methods include recognizing a patient's abilities and the degree of actual responsibility he retains even while ill, and then furnishing varied environmental conditions which permit respect for and utilization of such abilities and responsibility. These methods also include provision for alternatives to full-time hospitalization in terms of out-patient service, day service, night service, half-way house care and provision for rehabilitation services.

The development of Butler resembles that of several other treatment centers elsewhere in America. The emphasis on milieu therapy is similar to that of the Menninger Clinic. The use of open doors, day program, and group discussions led by psychiatric nurses is also proving effective at Allen *From Isaac Ray Library, Butler Health Center, Providence, Rhode Island (formerly Butler Hospital).

Memorial Institute in Montreal. Intensive study of the interaction between personnel and between personnel and patients is also taking place at Chestnut Lodge. Massachusetts Mental Health Center has the most similar program with which we are acquainted, with emphasis upon almost all of the areas we mentioned, but in the setting of a small intensivetreatment state hospital with a very large and active psychiatric resident training program.

The principal divisions of clinical service at Butler are the out-patient department, the day service and the in-patient or residential service. There is a close interlocking between each service, permitting patients to be easily transferred back and forth between these services. During the year, fifteen outpatients were found to be in need of supervised living experiences and activities that could be provided by the day program, and eighteen out-patients were found in need of full-time residential service.

After residential patients no longer need full-time hospitalization, some may still need long-term rehabilitation or psychotherapy. Such patients may then return home and continue to come in for day care. During 1958, twenty-one cases came back for day care, and forty-one came back for out-patient service. Hence each of these major departments is serving far more patients than those admitted directly from the community.

In the period January 1, 1958 to December 31, 1958, these clinical services have been formally rendered to 511 different persons. Two hundred and eighty-seven were first admitted to the outpatient department, 64 to the day service, and 160 to the residential service.

The following table will show the extent to which each of these services is used. It also will show the extent to which patients are transferred from one service to another.

	Out-Patient	Day Service	In-Patient
Admitted from Commun	ity 287	64	160
From out-patient	********	15	18
From day service	9	******	10
From in-patient	41	21	
Total	337	100	188

The following table shows the number of patients admitted to a given service from the outside com-

munity as compared to those coming from other hospital services.

From Community Directly 85%	From other Hospital Services (Out, In, Day) 15% 36%
85%	15%
	Community Directly 85% 64%

We can see the interdependence of these services. The day service receives 36% of its admissions from out-patient or residential service. This is largely because these patients' needs have been so thoroughly scrutinized by the hospital staff that the value of the day program for them is recognized. On the other hand, for a new patient coming to Butler Health Center without any previous complete evaluation, the value of this service cannot be immediately recognized. It is the newest program and its full range of usefulness is being determined.

Source

The geographical source of patients varied in the three services:

Providence	Out 169	Day 60	In 58	Total 287
Rest of Rhode Island	155	40	112	307
Outside Rhode Island	13	0	18	31

As might be expected, the day program is particularly used by people of Providence because of transportation ease, while the use of the residential service is more representative of the population of the state. The out-patient service is intermediate in this respect.

The source of referral likewise differed in the three services. The out-patients were referred about equally by Providence physicians, Butler in-patient service, psychiatric associates of Butler and other Rhode Island physicians.

REFERRAL SOURCE

	Out	Day	Residentia
Psychiatric associates of			
Butler	28	8	83
Consultants	6	0	6
Other R. I. psychiatrists	13	4	12
Other Providence physicians	37	3	28
Other R. I. physicians	24	1	19
Psychiatrists out-of-state	5	1	4
Physicians out-of-state	4	0	7
Division of Vocational			
Rehabilitation	89	47	*******
Day patient	9	*******	10
Out-patient		15	18
In-patient	41	21	*******
Social agencies and other	81	0	1
Total	337	100	188

In-patients came predominantly (83 or 44%) from our associate psychiatrists, 28 or 15% from out-patient or day service. These figures show the

degree to which the residential service supports the out-patient and day service (as well as the private practice of our associates) in those cases needing full hospital treatment.

The greatest number of day patients (47) came from the State Division of Vocational Rehabilitation, twenty-one came from the in-patient service and fifteen from out-patient. A total of sixteen came from our associates and other Rhode Island physicians.

Of the 83 patients referred by our associates, 66 were treated by them while in the hospital. Of the 188 individuals admitted to residential service, 135 or 72% were voluntary admissions and 53 or 28% were committed. This high proportion of voluntary admissions well indicates the degree to which patients participated voluntarily in their own treatment plans.

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Age and Sex Distributions

Patients from twelve years of age upward are accepted for full twenty-four hour hospitalization, day service, or out-patient service. A limited service is provided to a few patients under twelve in the out-patient department. Because of the absence of other private facilities for the twelve- to eighteen-year group and the particular demand for these services, patients in this age group have made use of all three services.

The patients served ranged in age from 6 to 92. Out-patient, 179 males and 158 females; day patient, 43 males and 57 females; in-service, 51 males and 137 females.

AGE GROUPS

	Out	Day	Residen- tial	Total
Under 12	10			10
12 to 18	59	19	18	96
19 to 65	260	76	138	474
Over 65	8	5	32	45
Total	337	100	188	625

	SEX			
	Out	Day	Residen- tial	Total
Males	179	43	51	273
Females	158	57	137	352
Total	337	100	188	625

Diagnostic Facilities

During 1958, the diagnostic facilities of the Center were increased substantially. A new eight channel (expandable to sixteen) electro-encephalograph was purchased, a new basal metabolism unit was donated by the auxiliary. Additional consultants in ophthalmology, anesthesiology, dentistry, and dermatology were appointed. Procedures for study of continued on page 517

BUTLER HEALTH CENTER FIRST FULL YEAR OF OPERATION continued from page 516

children, adolescents and older patients were developed. Rehabilitation evaluations were made more effective through fuller integration of the examinations made by psychologist, psychiatrist, social caseworker, rehabilitation counselor, and sociologist.

The diagnostic facilities of the Center: clinical, laboratory, psychology and social service departments are equally available to all three major services: out-patient, day service, and residential

service.

Although a considerable number of the patients admitted have had extensive evaluation by the referring physician, many others are admitted originally for evaluation. A fundamental part of the service given by the Center was that of diagnostic evaluation.

DIAGNOSTIC STUDIES DONE IN 1958

	Out- Patient	Day Service	Residen- tial Service	Total
Urine examination	0	12	200	212
Blood examination	17	101	552	670
EKG's	7	3	88	98
EEG's	1	2	13	16
Basal metabolism	0	1	5	6
Physiological				
(Funkenstein, etc.)	0	2	11	13
X rays	20	8	431	459
Psychological	30	25	70	125
Social service	148	74	228	450

A comparison of the diagnoses of these patients admitted to the three departments of the Center shows the type of problem each department has been treating during 1958.

	Out- Patient	Day Service	In- Patient
Chronic brain syndrome	17 (5%)	7 (7%)	13 (7%)
Affective reaction	34 (10%)	14 (14%)	55 (29%)
Schizophrenic reaction	37 (11%)	24 (24%)	41 (22%)
Psychoneurotic	66 (20%)	21 (21%)	46 (24%)
Personality disorder	90 (27%)	26 (26%)	30 (16%)
Adjustment reaction	27 (9%)	6 (6%)	
No diagnosis	45 (12%)	2 (2%)	2 (2%)
No disease	8 (2%)		1 (1%)
Testing only	13 (4%)		
Psychotic reactions	26%	45%	58%
Non-psychotic reactions	56%	53%	40%
Others	18%	2%	2%

It is interesting that there is a considerable similarity in the seriousness of disorders treated in the three departments. 58% of in-patients, 45% of day service, and 26% of out-patients have psychotic reactions.

We so often assume that out-patient departments serve only psychoneurotics. Actually 20% of the out-patients were psychoneurotics and 26% psychotic. One service of the out-patient department is that of evaluation, testing, etc. 18% of the outpatients tested showed no disease.

Perhaps the most surprising fact is that a greater proportion of day service patients had schizophrenic reactions (24%) than in-patients (22%) or outpatients (11%). We have become so accustomed to think of schizophrenic patients as requiring hospitalization that it is somewhat surprising to see them more commonly in the day program and outpatient department.

We think of finding psychoneurotic reactions rarely in a hospital population, but here we find slightly more than in the other services: in-patient 24%, day service 21%, out-patient 20%. In attempting to understand this, we find the largest number of the in-patient and day service psychoneurotic reactions were depressive reactions; day service 12 of 21 (57%), in-patient 27 of 51 (54%), out-patient 29 of 72 (40%). It appears that for this category the suicidal risk coupled with the effectiveness of removal from the precipitating situation frequently leads to hospitalization or day service. It is notable that the affective psychotic reactions tended to be more frequently cared for in the inservice (29%) than day service (14%) or outpatient (10%), doubtless for the same reasons.

Who Were Patients Treated By

The medical staff of Butler Health Center includes twenty-nine consultants (four in psychiatry), twelve psychiatric associates, and two medical associates in addition to its full-time staff of four psychiatrists. These psychiatric associates and psychiatric consultants in practice in the community, can treat their patients at Butler in all three services: out-patient, day service and residential service.

This practice, which is beginning to develop in some other mental hospitals of the country, has the obvious advantages of preserving the patient's relationship with his physician, or thereby making the hospitalization or day hospital service an episode in the patient's total treatment. This continuity of service appears to reduce the threat of hospitalization, insure after care and thereby shorten and im-

prove the patient's treatment.

Perhaps the most important trend occurring during the year was the increase in the number of patients referred by and treated by our own psychiatric associates. During the first six months of the year, of sixty-nine patients admitted, nineteen had been referred by our associates and ten were treated by them. During the last six months of the year, of 119 admissions, our associates had referred sixty-four and fifty-six were treated by them. This means that roughly 25% of the patients in the hospital at any one time are being treated by our psychiatric associates.

In addition to this, one of our associates in internal medicine assumed the responsibility for the continued on next page medical problems of our geriatric patients. The number of these patients in the hospital at any one time increased from six in January to twelve for the months of September to December.

This leaves the full-time psychiatric staff with little increase in treatment responsibility through the year in spite of a substantial increase in number of in-patients. An important part of our work thus became the development of smooth co-operation between our associates, the nursing staff, and ourselves.

This degree of participation of sixteen community psychiatrists (twelve associates, four consultants) in the work of Butler Health Center makes it a center of psychiatric service rather than a separate hospital conducted by only the full-time staff. In this respect Butler Health Center differs from most private mental hospitals.

Treatment

A broad spectrum of treatment is represented by the twenty psychiatrists who have been treating patients at Butler during the past year. This shows that psychiatry today is tending away from dognatic and sectarian adherence to one limited type of treatment and toward an acceptance of all methods of social management, psychotherapy and somatic treatment as needed. It appears that all psychiatrists utilized all treatment methods. This observation deserves further documentation, for it shows that psychiatry is coming into a mature status as a medical specialty.

PATIENT TREATMENT

	Out- Patient	Day Patient	In- Patient
Individual psychotherapy	150	40	61
Group psychotherapy	26	53	56
Psychiatric casework with relatives	23	36	57
Psychological counseling	12	14	11
Milieu therapy (organized) Milieu therapy (informal)		********	26 50
Phrenotropic agents	5	39	54
Electric convulsive therapy	26	53	56

Psychotherapy varies in frequency, one to five times weekly. It is usually conducted by a psychiatrist, but often by a psychologist or a social caseworker under psychiatric supervision. Individual psychotherapy has become increasingly important, in part because the use of chlorpromazine can now render psychotic patients more accessible to the psychotherapist.

Psychopharmacology, the use of the newer drugs which act as psychic energizers or tranquilizers, follows accepted patterns. However, we have applied the results of research conducted on non-patient subjects by our research team. This research has particularly concerned the effects of Chlor-

promazine and Reserpine, which appear to be our most valuable drugs. There has been considerable trial of the selected use of Meprobamate, Ritalin, Marsilid. The need for the use of these drugs as a part of a total treatment procedure has been constantly recognized. The use of a drug which alters the patient's acceptance of people requires special attention to his environment so that his response, when altered, can be directed towards appropriate people. Chlorpromazine was equally useful with many older agitated patients, producing sufficient relaxation so that they could engage in activity and socialization, which for many was centered in the homecraft program in occupational therapy. Others received more comfort from Reserpine.

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Electric convulsive therapy had its place where there were deep depressions, and sometimes where the above combination of chlorpromazine with either psychotherapy or milieu therapy was unavailing.

Group Psychotherapy has taken the conventional form of small, closed groups, and has followed the methods of open group psychotherapy developed by Doctor Bockoven at Massachusetts Mental Health Center. It has also included groups with more circumscribed goals pertinent to rehabilitation. One group, led by a psychiatric caseworker, focused particularly upon the area of family adjustment, another, led by a rehabilitation counselor, focused particularly upon work attitudes and motivation; another, led by a physical therapist, and composed of patients with predominant physical disabilities, focused upon patients' reaction and adjustment to their disabilities. All the group therapists were supervised regularly by a psychiatrist with group psychotherapy experience.

"Milieu therapy" is primarily the province of the nursing service and the occupational therapy department. Conducted under psychiatric supervision, guidance and prescriptions, it consists of providing the in-patient and day patient with an hour-by-hour experience that is valuable to him therapeutically, that is individualized, and that respects his needs. This can be done only in a treatment unit with a co-operative investment in the treatment program. which includes rapid communication between patients and personnel, and between all elements of personnel: doctor, nurse, L.P.N.'s, attendant nurses. It requires an open door (controlled where indicated) nurses out of uniform, utilization of the facilities (churches, schools, stores, theaters) in the community, and co-operative planning among doctors, nurses and patients in the use of these outside facilities. A broad program of opportunity for supervised experience must be available through cooperation among occupational therapy, nursing and physical therapy personnel under psychiatric supervision. This must provide for occupation, avocation, education, recreation, relaxation as indicated. An addition this year has been a school teacher to provide conventional educational opportunity.

Milieu therapy became increasingly effective as the clinical team became more experienced in working together. It required frequent discussions, usually led by a psychiatrist or nursing director, with the goal of learning the views of personnel with respect to each patient's needs and of arriving at a consensus of opinion as to what action would motivate the patient in the direction of mental health. Such discussions in themselves stimulate personnel to serious thinking about patients and raise the patients' value as members of the hospital community.

Out-Patient

The work of the out-patient department was extended through the service of several of our associates in psychiatry, as well as that of part of the time of all four of our full-time staff. A full-time psychiatric caseworker, psychologist and secretary make up the rest of the staff.

A total of 337 different persons were admitted during the year, of whom 132 were in the clinic for evaluation only, while 205 were engaged in treatment. A total of 2,510 hours of clinical service were given of which 2,129 was for treatment visits for the 205 patients in treatment, or an average of 10.4 treatment hours per person.

In determining the function of the out-patient department, it is seen that one of the most important (132 patients) is that of diagnostic evaluation. To have an opportunity for diagnostic study without hospitalization avoids much unnecessary discomfort, fear, and disruption of family life.

For the forty-one patients coming to the outpatient department from the residential service, the continuing treatment in the out-patient department made it possible for these patients to leave the hospital and return to their homes earlier. Furthermore, it provided the long-term treatment necessary to bring about those fundamental changes which decrease the possibility of any recurrence of illness.

One of the primary functions of the out-patient department is to serve persons who might otherwise require hospitalization or who have difficulties of a nature that might lead to hospitalization if they do not receive help at the proper time. This is possible where the patient's relationship with his psychotherapist provides the support and understanding that he needs. It also occurs where the social caseworker, in conjunction with the psychotherapist working with the patient, support the family and produce an improved home situation. The Butler out-patient department served this function for ninety patients.

Out-patient treatment was found to be particularly useful where the patient needed to continue his relationship with employer, family, or community groups, but required additional support and assistance to do this. In many cases success depends upon the patient's maintaining confidence, self-esteem, and the sense of accomplishment which he achieves through remaining in community life. Here out-patient treatment has definitive value.

Many of the patients are incapacitated in a way that, although not leading to imminent hospitalization, has led or is leading to loss of employment and support of families with children. In other cases the patient's behavior causes injury to children.

In contrast to hospitalization, out-patient treatment affects only a segment of the patient's social and psychological life. Thus the patient still maintains essential areas of competence. These segments of disorder may be in relations with school, marriage, children, work, friends. Here out-patient treatment is usually sufficient and has the advantage of preserving the remaining areas of satisfactory adjustment. There were sixty-seven people during the year who, although able to work and maintain family life in a fair way, were living much less than a full life because of periods of despondency, acute anxiety and uneasiness in relations with others. These people were helped to overcome these handicaps.

Day Program

The Day Program developed during 1958 with a clinical team of psychiatrist, psychiatric nurse, social caseworker, and secretary.

The activity program used by day patients is the same as that used by residential patients and was provided by occupational therapists, home craft teacher, woodworker, printer, and arts and crafts instructor; it received assistance from a large corps of volunteers and the maintenance, housekeeping and dietary departments of the Center.

Group psychotherapy became an outstanding feature of the program with four groups in operation. A new service was the development of a school with nine pupils studying a wide range of subjects.

The total number of patients on the program throughout the year was 121. This includes twenty-one patients carried over from the previous year and 100 different persons admitted in 1958. It represented a "half-way house" type of service for twenty-one in-patients who were not ready to take up full community responsibility. These patients would have had to stay in the hospital longer if the day program had not been available. For the fifteen patients received from the out-patient department, it represented an additional service of socialization and support, often providing an alternative to hospitalization.

continued on page 534

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DR. OCHSNER, LUNG CANCER AND TOBACCO

T IS ENCOURAGING to know that the Fiske Fund Prize essay contest, first established in 1835, has maintained its vitality through the years despite the modest stipend offered. Even though the contest in recent years has attracted entries from as far away as the Pacific Northwest, it is still no accident that Doctor Alton Ochsner of New Orleans saw fit in his maturity to turn his brilliant hand toward this endeavor. Printed elsewhere in this issue is his prize essay Bronchogenic Carcinoma — Predisposing Causes. In it he espouses a cause for which he has been a strong adversary for a number of years.

The question of lung cancer and cigarette smoking has been discussed previously in these columns on several occasions. In the issue of April 1957, it was stated that: "The evidence of a relationship between smoking and lung cancer . . . seems to be increasing." In November of the same year the following statement appeared: ". . . we are now at a point at which it can be said that smoking, cigarette smoking in particular, is one of the factors, possibly the most important factor, in the causation both of bronchogenic carcinoma and of chronic obstructive emphysema."

The further impressive marshaling of evidence in this brief monograph on the relationship between lung cancer and cigarette smoking comes to our editorial advertence, therefore, not as a revelation, but rather as final confirmation of a proposition already stated. We congratulate Doctor Ochsner, not only for winning the current Fiske Prize, but even more for bringing to us this timely message.

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PHYSICIAN SUPPORT OF MEDICAL SCHOOLS

Only Alaska had fewer physician contributors to the American Medical Education Fund than did Rhode Island in 1958.

On the surface this bare statement of fact might be interpreted to indicate a lack of financial support of medical education by the doctors of Rhode Island. Nothing is farther from the truth. For reasons best known to themselves, our members prefer to contribute directly to the medical school of their choice through direct donation to alumni funds, rather than through the mechanism of the AMEF.

A study of the 1958 statistics released by the Foundation provides some interesting data on the role that Rhode Island physicians played in helping medical education last year. For example, the national average for the individual contribution to all funds collected, by the Foundation and through Alumni programs, was slightly over \$39. The Rhode Island individual average was almost \$43.

A total of 418 Rhode Island physicians contributed \$17,922.67, of which \$17,030.67 was given directly to medical school alumni funds by 387 doctors, and the balance represented AMEF contributions.

Thirteen states contributed less than Rhode Island, and three, with more contributors and larger medical populations, were not far ahead of us. West Virginia, with 64 more contributors bested our total by only \$609; Mississippi, with 208 more doctors giving, had only \$1,774 more in its total; and Utah, with 310 more doctors aiding, contributed only \$6,068 more than Rhode Island.

It is of little matter how the funds are donated as long as there is continuous support of the medical schools in their efforts to continue their work on a free and independent basis with a minimum of support from federal tax sources.

Our breakdown of the 1958 medical school contributions is presented only to emphasize anew that the doctors in Rhode Island have, as always, done their share in the financial giving for medical education.

MEDICINE AND OSTEOPATHY

The relations between medicine and osteopathy came up for review again at the recent annual session of the American Medical Association, and apparently another step was made which may eventually result in the transfer of the osteopathic colleges into the realm of accredited medical schools.

Underlying the efforts to reconcile differences between osteopathy and medicine is the fact that one fourth of the states still have restrictive legislation relative to the extent to which osteopaths may practice the healing art. The position of medicine remains unchanged in its objection to systems of healing practiced as medicine by practitioners without the same educational standards as a doctor of medicine.

In the opinion of the A.M.A. House of Delegates, as indicated in the adoption of the reference committee report of the Judicial Council's activities, "in each state there should be established one educational standard in the field of the healing art administered by a single licensing board by which anyone who is authorized to practice the healing art should be required to prove he has secured satisfactory training in the fundamentals of medical science,"

Further, the Judicial Council expressed the opinion that osteopathic colleges, and indeed all colleges teaching the healing art or any of its branches, should be inspected and classified according to the same standards of measurements now being applied in medical schools and by the same boards which approve medical schools.

As a step to encourage osteopathic colleges to make this change, the A.M.A. House adopted a statement of policy indicating that it shall not be

considered contrary to the principles of medical ethics for doctors of medicine to teach students in an osteopathic college which is in the process of being converted into any approved medical school under the supervision of the A.M.A. Council on Medical Education and Hospitals.

The American Osteopathic Association, through its policymaking body a year ago, amended its constitution to define its objects to promote public health, to incorporate scientific research and to maintain and improve high standards of medical education in osteopathic colleges. Thus, the influence of founder Andrew Taylor Still gave way to the new concept of osteopathy as ultimately becoming part of medicine.

It is to be hoped that out of the latest action of the A.M.A. may develop a liaison committee with the osteopathic association that will consider problems of common concern, including interprofessional relationships on a national level.

Doctor Oliver Wendell Holmes, in one of his addresses, urges his hearers not to look with contempt on their old medical books. "The debris of broken systems and exploded dogmas," he continues, "forms a great mound, a Monte Testaccio of the shards and remnants of old vessels which once held human beliefs. If you take the trouble to climb to the top of it, you will widen your horizon, and in these days of specialized knowledge your horizon is not likely to be any too wide." Now that the period of purely professional education has been prolonged, the tendency to this narrowness of view is likely to increase, and no better antidote could possibly be found than the study of medical history, a subject which makes us acquainted with the most diverse forms of thought and brings before us every phase of civilization.

EDWARD THEODORE WITHINGTON, M.A., M.B. Medical History

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Interim Scientific Meeting

WEDNESDAY ... SEPTEMBER 23

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DETAILING IS ALSO PUBLIC RELATIONS*

MARC WOODWARD

The Author. Marc Woodward, of New York, New York. Assistant Executive Director, Health News Institute, New York.

It is a real pleasure here today to have the opportunity to meet with you and give you some of my ideas about public relations in the health field.

From the title of my talk it might be suspected that I know something about the profession of the medical service representative, or detail man, if you will.

I know very little about it. About all I know is that the detail man comes in contact with the most important customers that the purveyors of medicine have—the doctor, the pharmacist, and the hospital—and that his approach to them must, of necessity vary.

Nevertheless, they—the doctor, the pharmacist, and the hospital, together with the detail man's boss, the manufacturer—constitute a team. A team that administers to the health of our country.

Now, for some years that team has enjoyed a rather special privilege of immunity from criticism from the press, the government, and the general public. Starting a couple of years back, this very special situation began to undergo a marked change. The year 1958 saw considerable criticism in the press of the cost of being sick. This criticism was directed at all of the members of the health team. And 1959 will witness even more criticism.

As John T. Connor, president of Merck & Co., put it recently in a speech to the New York Board of Trade, "It is the year the public comes to call. This is the year the public walks into our house and takes a look around. So much of our future is dependent on how we respond to this experience," Mr. Connor said, "that I can think of no subject that deserves a higher priority for our discussion."

Pointing out the various governmental investigations of the pharmaceutical industry under way, such as hearings on drug prices, investigation of polio vaccine sales, patents, antibiotics, Mr. Connor said, "As the crowd collects around our house and the television cameras move in, we can be sure that we will find ourselves entertaining several other gentlemen with an occupational fondness for the warm glow of the klieg lights."

Doctor Linwood Tice, in an editorial appearing in the December, 1958 AMERICAN JOURNAL OF PHARMACY, put it a little more strongly when he said:

The philosophy behind the criticism of the drug industry is in keeping with the times for it has become good statesmanship in America to give the masses what is popular and what they want regardless of how wrong it is or how harmful to the country. It is this sort of political expediency and chicanery which keeps the national budget unbalanced in times of unprecedented prosperity, permits the most unbelievable excesses in certain corrupt labor unions, and fails to recognize our most serious national weaknesses such as in education and civil rights.

It is very good politics to criticize the drug industry since the average man is never happy about the outlay of a few dollars for drugs, even though it saves his life. The thousands he spends for a chrome-bedecked and gadgeted monstrosity called an automobile, he spends gladly and even goes in debt willingly to obtain. For such an over-priced luxury, his interest and carrying charges alone per year exceed his annual drug bill, but he gives this no thought at all.

I must say here, however, that the drug industry is not alone as a target for criticism.

Hospitals and Medical Profession Subject to Attacks

Recent years have witnessed nagging attacks by certain government personnel and agencies against the medical profession. The press has not been too kind in this direction either. The attack seems to be against "organized" medicine. What the critics don't seem to take into account is that medicine in this country is organized as much for the protection of the patient as it is for the doctor. We would not enjoy such benefits as emergency call service or the reduction of fees for lower income bracket patients if it were not for the fact that our doctors get together and iron out these problems. And don't continued on page 524

^{*}An address delivered at the Second Annual Medical Service Representatives Conference, 148th Annual Meeting of the Rhode Island Medical Society, at Providence, Rhode Island, May 12, 1959.





Patient M.S., 81, at the time of the first visit was in severe pain and very uncomfortable. Complained of swelling of wrists, legs and various joints; pain and stiffness in cervical area and lower spine; pain, swelling and limited motion in the fingers; slight ulnar deviation of the hand. M.S. demonstrates position necessary to put on his hat motion was so restricted that he could not comb his hair).

Treatment and Result: After 36 hours of GAMMACORTEN therapy, M.S. had "complete relief." Joint swelling had decreased, pain was almost absent, range of motion had increased dramatically. At the end of the first week of GAMMACORTEN he was free of discomfort and able to return to his job as a porter. M.S. could put on his hat normally, could comb hair; joint function near-normal after first week.

(dexamethasone CIBA)

- · potent, effective corticosteroid
- · profound anti-inflammatory activity
- · minimal side effects

From the files of a practicing physician. Photographs used with permission of the patient.

SUPPLIED: GAMMACORTEN Tablets, 0.75 mg. (pink, scored).

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DETAILING IS ALSO PUBLIC RELATIONS

continued from page 522

forget that every county medical society has a board of censors for the express purpose of disciplining its own membership.

The hospitals, too, have recently come under attack. A national magazine, only this past winter, devoted a substantial number of pages to criticizing hospital practices, but based its article on case studies representing a small percentage of patients. A very recent series of articles in a New York newspaper reported in considerable detail the unfavorable aspects of the operations of an overworked hospital.

So, you see, we are all in it together. And the only way to set the record straight is for every member of the health team to keep every other member in mind at all times. Everyone concerned with the nation's health, from Surgeon General Burney right down to the last assembly line operator on a tablet-processing machine, has a responsibility to help keep the record straight. This responsibility is not necessarily only to one's employer, but to keeping the public informed of the facts, meanwhile remembering the other members of the team.

Today's public has a consuming interest and curiosity about its own health. It has satisfied this curiosity to the extent of learning what some drugs and medical advances have accomplished about curbing suffering and extending the life span. But it knows next to nothing about how these accomplishments have come about from the scientist's conception to the bedside of the patient.

And the public has the right to know. All right, how is it going to learn?

Are we, the members of the health team, going to leave it to the self-seeking politicians who instigate inquiries for their own aggrandizement, to explain to their constituents the complexities of medical care?

Or are we going to leave it to certain elements of a headline-seeking press to assess the costs of medication, hospitalization and doctor's fees?

I doubt that anyone in this room would, if he seriously looked into these problems, want to forfeit that responsibility.

A little over three years ago a group of thoughtful and enterprising men in the pharmaceutical manufacturing field came to the conclusion that public attitudes had developed toward the entire medical care situation in this country to the point that something should be done about it—and right away. As a result, the Health News Institute came into being, under the direction of Chet Shaw.

The Health News Institute has had as its objective the presentation to the public of a true picture

of the research, production and distribution operations of pharmacy and pharmaceutical manufacturing and the health team in general, and the creation of a better understanding of their contributions to the nation's health.

We maintain continuous liaison with all members of the health team in this effort to account to the public for the total contribution which is so vital in our present standard of living. We try to crossfile information and conduct informative relationships mutually with other segments of the health field in order that the same story will be told from an objective and factual point of view.

I must say we have had magnificent co-operation from the other elements of both the pharmaceutical industry, from manufacturers to small-town pharmacists, and the medical profession, in this effort,

But in our opinion, no segment of the team can disassociate itself from any other segment. When one member is attacked, all suffer.

You may ask right here, "Why has all this criticism come about?"

There's an answer and a good one. Let me give you an example.

It goes back to the old army saw that if you never volunteer you never get into trouble. Just so, if you do nothing, no one pays any attention to you.

But the field of health and medicine has made tremendous progress since World War II, thereby attracting notice... some of it good and some of it bad. It is usually the bad that sticks in the public memory. Like a little scandal surrounding the family of an eminent man. The public finds it easy to forget his accomplishments if his son turns out to be a bigamist.

It was only when the pharmaceutical industry grew big enough to really be considered a national asset of significance; whose daily contributions to the battle against disease became well known to our own public, that it was subjected to closer scrutiny.

Role of Detail Man

Now, I'll get down off the soapbox and we'll take a look at where the members of the health team can be useful in telling our story. Specifically, in this instance, the detail man who works for a manufacturer of medications.

First, since the detail man meets the ultimate customer—the doctor or the pharmacist or the hospital procurement department—he is in an ideal position to be a missionary.

Here for the sake of argument and to emphasize a point, let's play with some figures. I'm no mathematician, but I've found that you can make statistics and figures work for you.

There are some 15,000 detail men in this country operating five days a week average. Even if they only make five calls a day it means they can see

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Don't forget, Doctor – "to take some of your own medicine!"

On vacation — at the beach — on the golf course — or gardening in your own back yard, sunburn, insect bites, cuts and abrasions are all part of the summer picture.

A handy tube of Xylocaine Ointment means prompt relief of pain, itching and burning for your patients. After you've seen to your patients' comfort, remember that tube of Xylocaine Ointment for yourself.

Just write "Xylocaine Ointment" on your Rx blank or letterhead, and we will send a supply for you and your family.



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2.5% & 5%

SURFACE ANESTHETIC

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DETAILING IS ALSO PUBLIC RELATIONS

continued from page 524

75,000 Americans every day. Working five days a week they can make 375,000 contacts a week or 18,750,000 contacts a year—more than one tenth of our population. (I'm giving each detail man a two-weeks' vacation, you understand.)

That one tenth of the population is vital because they are the men and women who are most directly concerned with our health standards. They are the doctors, the pharmacists and the hospital personnel who determine what medications patients consume. In 90 per cent of the cases the patient doesn't choose the product or determine the therapy to be used against his particular illness.

You may well ask then, "So what's our story?" The story is this:

First, the pharmaceutical industry is already subject to extensive and detailed government regulations of many kinds, some of which are unique in American manufacturing.

Next, the risk of product and production obsolescence is present in a special degree since the pace of new discovery leading to such obsolescence is rapid. Then too, there is the risk of unsuspected side effects.

Third, and related to the risk factor, is the elaborate quality control and testing procedures in which costs are extremely high in relation to manufacturing costs in other industries.

relief from all cold symptoms Tussagesic*

decongestant, non-narcotic antitussive, analgetic, expectorant

Each timed-release tablet provides:

Triaminic®	50	mg.
pheniramine maleate12.5 mg.		
pyrilamine maleate12.5 mg.)		
Dormethan (brand of dextromethorphan		
HBr)		
Terpin hydrate	180	mg.
APAP (N-acetyl-p-aminophenol)	325	mg.
Dosage: One Tussagesic tablet in the m mid-afternoon and evening, if needed.	orn	ing,
Also, for patients who prefer liquid medi	icat	ion:
TUSSAGESIC SUSPENSION.		

SMITH-DORSEY • Lincoln, Nebraska a division of The Wander Company Next, the control of shipments is of the utmost importance, a factor which is probably unique in American industry.

Then there is the level of research expenditure as a proportion of the sales dollar. This percentage is estimated at from seven to nine per cent for the research in medicinal production and development, as compared to an average of about two per cent for general industry research expenditures in the United States.

As a matter of fact, the Pharmaceutical Manufacturers Association this year estimated that to obtain only one drug for clinical investigation, some 60 substances on the average were prepared and biologically tested. Forty-four completely new chemicals (of a total of 370 new medicinal products marketed in 1958) were introduced by the industry last year, of which 16 came from non-U. S. sources and six represented minor modifications of older drugs.

Thus, it can be said that the expenditures during previous years of the U. S. pharmaceutical industry in research and development—and this ran over 170 million dollars in 1958—resulted in market introduction last year of from twenty to thirty really new drugs. Each new drug marketed can be regarded as having had back of it some six million dollars in total industry research and development expenditures as its share of the combined research effort.

The next point I would like to mention is that special problems in education of doctors, pharmacists and hospital personnel are faced by the pharmaceutical industry.

Nearly half the time a doctor learns of a new drug through the personal visit of the detail man. Few laymen realize how heavily the burden of keeping up with medical advances weighs on doctors. The doctor cannot practice medicine just as he learned it in medical school. Yet, surveys have found that his time is so taken up that the average doctor can spend only a little over half an hour a day reading medical journals, looking at mail, and interviewing detail men.

This education of doctors in connection with new products and new types of therapy is to some extent unique in character. It is, of course, generally tied in with advertising. And I am speaking here principally of ethical drug products advertised only to the medical profession and to the profession of pharmacy. This alone makes drug promotion and advertising quite different from that of other industries. This absence of consumer advertising at times may result in conflicts with the lay press in premature and perhaps exaggerated reporting as to the uses and effects of new drug discoveries.

There is, however, no need for such a situation to become a conflict within the health team itself.

continued on page 530

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tranquilizers

The presence of a thiomethyl radical (S-CH3) is unique in Mellaril and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.



- 2 Less "spill-over" action to other brain areas hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.
- 3 A notable absence of extrapyramidal stimulation.
- 4 Lack of impairment of patient's normal drive and energy.
- 5 Virtual freedom from such toxic effects as jaundice, photosensitivity, skin eruptions, blood forming disorders.

MELI	LARIL
DAMPENII SYMPATHETI PARASYMPAT	linimal suppression of vomiting Little effect on blood pressure and temperature regulation
Psychic relax II	
Dampening of	The supercolon of vamiling
sympathetic and parasympathetic	Strong suppression of vomiting Dampening of blood pressure
parasympath	bearing of those process

temperature regulation

TOTAL DAILY DOSAGE RANGE USUAL STARTING DOSE INDICATION ADULTS: Mental and Emotional Disturbances: MILD - where anxiety, apprehension and tension are present 10 mg. t.i.d. 20-60 mg. MODERATE-where agitation exists in psychoneuroses, alco-25 mg. t.i.d. 50-200 mg. holism, intractable pain, senility, etc. SEVERE - in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.: 100 mg. t.i.d. 200-400 mg. Ambulatory 200-800 mg. Hospitalized 100 mg. t.i.d. 20-40 mg. CHILDREN: BEHAVIOR PROBLEMS IN CHILDREN 10 mg. t.i.d.

ELLARIL Tablets, 10 mg., 25 mg., 100 mg.

DETAILING IS ALSO PUBLIC RELATIONS

continued from page 526

The American Medical Association reported on a survey they had made last year, saying that most drug companies spend less than an average of five per cent of the retail sales price to advertise and promote their products.

If this expenditure were eliminated a fifty-cent capsule would cost about forty-eight cents. But this would eliminate the means necessary to produce mass volumes sales, without which the cost of producing the same capsule would not have been brought down to the fifty-cent level in the first place.

Cost Factor in Drug Manufacture

The price of drugs is a constant nag because it is ill understood by the public. Yet ours is a system in which price decreases are the rule rather than the exception. Antibiotics, vitamins, hormones and steroids have all gone down precipitously in price since their introduction and are at the lowest price levels in history.

Doctor Paul Olsen, of *Drug Topics*, last month estimated that the average price of a prescription drug in 1958 was only \$2.78. The American Druggist magazine estimates the average price at \$3.08, so it must be somewhere around the \$3.00 level.

David Stiles, director of marketing development for Abbott Laboratories, conducts a yearly survey of some 200,000 prescriptions. His last survey revealed that ten per cent of all prescriptions cost a dollar or less. Over 66 per cent were three dollars and under. Over 88 per cent were five dollars, or less. Only one per cent of 200,000 prescriptions were over \$10 in price.

Another item I believe detail men should be aware of about their industry and which they can point to with pride is the prodigious feat of turning out millions of doses of Salk vaccine in record time—then voluntarily reducing the price to less than half its original level. Or when Asian influenza threatened, how private industry tooled up to turn out the highly specialized vaccine, only to leave warehouses stocked with material whose therapeutic and market value was nil.

As John McKeen, president of Charles Pfizer & Co., said in a recent speech, "When facts like these are impressed in public knowledge, people will be able to form a true image of pharmacy and the pharmaceutical industry as honest, hard-working, productive members of American society with a deep sense of integrity."

Now, let me cite a couple more facts which may be useful in this same argument:

-Health Information Foundation reports that

between 1932 and 1952, the length of stay in hospitals per patient decreased from 12.8 days to 9.8 days.

—The Department of Commerce last year said that drug expenditures constituted only a 16 per cent share of total medical expenditures, as contrasted to 23 per cent in 1942.

—The National Health Education Committee gives these figures for the declines in mortality rates between 1944 and 1954 for the following diseases. I'll add here on my own that this is the period since the introduction of modern chemotherapy:

1101
11%
6%
3%
3%
3%
3%
0%
7%
3%
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These are all striking advances in modern health and they are unique in America. They should be repeated time and again along with the fact that modern medical care in America is a modern wonder of the world. It is more dramatic than the launching of a hundred sputniks because it deals with the lives of humans rather than the death of dogs.

I have continuing combats with some of my acquaintances who think they pay too much for what they are getting in the health field. When someone tells me they believe they are paying exorbitant prices for 20 antibiotic capsules, when twenty years ago their doctor might have been compelled to send them to bed with an aspirin tablet, I just inform them that modern drugs are no more expensive today than television sets were twenty years ago. Of course, neither was available twenty years ago. This generally ends the argument.

You may well ask what all this has to do with detailing, and you would be right in asking.

What I've tried to do is point up a few pertinent elements of the business of maintaining a high standard of health at a bargain that can be used in persuasion with your professional contacts as detail men.

Many of you may have better points to put forth. If you have, please use them.

Many of you may have great loyalty to your own products or to your own company. However, it isn't good public relations to knock the competition.

This isn't a mud-smearing political campaign. It is the business of the health of human beings. When one company within the industry, or one segment of the health team is knocked or singled concluded on base 538



Attention at Pfizer Research was then directed to a new drug that would overcome this disadvantage. NIAMID significantly raises the cerebral level of both serotonin and norepinephrine under experimental conditions.

The dramatic discovery of NIAMD now makes available an extremely effective, safe antidepressant for the successful treatment of a full range of depressive states.

Precautions

Side effects are most often minor and mild manifestations of central nervous system stimulation, modifiable by reduction in dosage; these may take the form of restlessness, insomnia, headache, weakness, vertigo, dry mouth, and perspiration. Care should be taken when NIAMID is used with chlorothiazide compounds, since hypotensive effects have been noted in some patients receiving combined therapy—even though hypotension has rarely been noted with NIAMID alone. There has been no evidence of liver damage in patients on NIAMID; however, in patients who have any history of liver disease, the possibility of hepatic reactions should be kept in mind.

Dosage and Administration

Start with 75 mg. daily in single or divided doses. After a week or more, revise the daily dosage upward or downward, depending upon the response and tolerance, in steps of one or one-half 25 mg. tablet. Once satisfactory response has been attained, the dosage of NIAMID may be reduced gradually to the maintenance level.

The therapeutic action of NIAMID is gradual, not immediate. Many patients respond within a few days, others satisfactorily in 7 to 14 days. Some patients, particularly chronically depressed or regressed psychotics, may need substantially higher dosages (as much as 200 mg. daily has been used) and prolonged administration before responses are achieved.

Supply

NIAMID is available in: 25 mg., pink, scored tablets in bottles of 100; and 100 mg., orange, scored tablets in bottles of 100.

References

Complete bibliography and Professional Informa-tion Booklet are available on request.



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BUTLER HEALTH CENTER -FIRST FULL YEAR OF OPERATION

continued from page 519

Our research studies show that the day program is particularly applicable where patients need more support, socialization or control than out-patient treatment offers, but do not require full twentyfour-hour hospitalization.

Both out-patient and day care can provide a gradual introduction to residential treatment for those patients reluctant to enter the hospital. On day care they can overcome their fear, become acquainted with us and we can wait for the patient to see for himself what advantages lie in full-time hospitalization. For many the anticipated residential treatment proves unnecessary.

Where residential treatment reinforces the patient's illness by increasing feelings of hopelessness, helplessness and incurability, or where it is liked too well by the dependent patient or becomes a lifetime sanctuary, the patient can find in the day program an opportunity to increase his confidence and self-esteem, and to overcome his denial of wellness. The family too can become impressed with the patient's ability rather than his disability.

The family can maintain its responsibility for the patient and engage constructively in the treatment program when the patient returns home each night.

The family has a respite from coping with the patient throughout the day and the patient from coping with them, but both can gain support and courage in working out their problems together during the rest of the day.

Residential Service (In-Patient)

During 1958, the living accommodations for inpatients were redecorated and refurnished, making three compact integrated units; acute, convalescent, and geriatric. The refurnishings converted the wide corridors into sitting rooms where patients could group in a congenial manner and have available to them books, games, television and handicraft supplies.

The nursing personnel, through experience and in-service training, developed into a smoothly functioning unit which provided individualized attention to each patient. Personnel consisted of eight psychiatric nurses, ten licensed practical nurses and fourteen attendant nurses. Co-operation between patients, nurses, and occupational therapy provided varied and entertaining evening and weekend programs as well as daytime activities.

Results of in-patient treatment for 1958 were as follows:

There were 150 different patients admitted for treatment during 1958, on whom final disposition had been made at the end of the year. The remainder of the patients admitted were for observation and temporary or custodial care only.

Of the 150 treatment cases, the following disposition was made:

Discharged to community recovered
Discharged to community improved
Discharged unimproved
Transferred to other hospitals or
nursing homes for further care
and treatment
Died

39 (26%)
9 (6%)
7 (5%)
2 (1%)

A total of 141 of these 150 patients or 94% were discharged to the community.

A total of 132 or 88% were discharged to the community as recovered or improved.

Another indication of treatment results is that the duration of hospital stay averaged thirty-four days.

The service rendered by a private hospital is limited where patients do not have the financial resources for such hospitalization. The extent to which financial lack has made transfer of patients to a state hospital necessary is a matter of general concern.

With one debatable exception, no patient with an acute mental disorder was transferred to a state hospital because of financial limitation during 1958. This was made possible by the assistance of the United Fund, the Butler Beneficiary Funds, and continued on page 536

LONG-TERM DISABILITY INSURANCE WHICH ONLY YOU CAN CANCEL BEFORE AGE 70*

is one of the necessary components of a

CERTIFIED DISABILITY PROGRAM

for the

Physician who wants to KNOW he's secure! Programs certified by Mr. R. A. Derosier and his staff assure the client that:

- 1 His program "fits" his individual case
- 2 His policies are the best that can be obtained for the premiums paid
- 3 His INSURABILITY is INSURED (only HE can cancel)
- 4 He will have speedy and efficient assistance, from one source, when he becomes a claimant.

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For every topical indication, a Burroughs Wellcome 'SPORIN'...

"CORTISPORIN"

Combines the antiinflammatory effect of hydrocortisone with the comprehensive bactericidal action of the antibiotics.

OINTMENT: Tubes of ½ oz. and ½ oz. (with applicator tip) for ophthalmic or dermatologic application.

OTIC DROPS: Bottles of 5 cc. with sterile dropper.

Provides comprehensive bactericidal action effective against virtually all bacteria likely to be found topically. 'NEOSPORIN'

OINTMENT: Tubes of ½ and 1 oz. and tubes of ½ oz. with ophthalmic tip. OPHTHALMIC SOLUTION: Bottles of 10 cc. with sterile dropper. LOTION: Plastic squeeze bottles of 20 cc.

NEW POWDER: Shaker-top bottles of 10 Gm.

'POLYSPORIN'

Offers combined antibiotic action for treating conditions due to susceptible organisms amenable to local medication.

OINTMENT: Tubes of ½ oz., 1 oz. and ½ oz. (ophthalmic tip).



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

BUTLER HEALTH CENTER – FIRST FULL YEAR OF OPERATION

continued from page 534

Federal Research support, which, together, made up the lack for those who could not afford full cost of hospitalization. Financial assistance was given to a total of 174 persons: 110 out-patients, 14 day patients, and 50 residential patients.

The increased proportion of cost paid by Blue Cross has benefited many others and made their

hospitalization at Butler possible.

In the case of four patients with chronic, longterm disorders which required lengthy care, financial lack that could not be made up by endowment or other funds led to hospitalization in state hospitals.

Our research study is delineating the areas where residential treatment is indicated. Generally speaking, it is indicated for patients with psychoses and psychoneuroses during periods of crisis in which estrangement and alienation between patient and family reach a point where relationships become too destructive to continue any longer. At such times admission to the hospital is of crucial therapeutic value.

Abatement of the destructive feelings requires a living situation where we can manage more aspects of their lives, induce rest if rest is needed, stimulate activity where activity is needed, where we can deal with the family and help them with their disordered feelings, and where we can prescribe the amount of

contact between patient and family.

Full-time hospitalization is often indicated where the patient is denying his illness or his relatives are denying his illness. Here the purpose is to permit patient and relatives to see that the patient is as ill as he really is. This is in contrast to the use of the day patient department for the opposite reason; that is, to let the patient who is cherishing his illness and denying his wellness see that he is as well as he is, and to let the family see that the patient is as well as he is.

There are many episodes of turmoil, panic, or

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delirium where full twenty-four-hour a day care is needed for the duration of the acute episode but where out-patient or day care is more appropriate as soon as it is passed.

There are times when a person may need a sanctuary either from outside stress or to assist his own controls.

Special Intermediate Services

The day service provides but one of the intermediate treatment opportunities between outpatient visits at one extreme and full-time hospitalization at the other.

Once we can overcome our institutionalized stereotype of seeing either full-time hospitalization or none at all, then a wide variety of valuable intermediate possibilities can be made available. Although we are just beginning to explore the advantages of these part-time hospital experiences, they are showing important possibilities and are going to increase.

Part-time Hospitalization can give the patient full hospital care and treatment for any determined part of the week as indicated. For one patient the period of Monday morning to Tuesday night and Thursday morning to Friday night was valuable; another is a regular in-patient but one day and night each week.

Night Care provides for those patients who can work, attend school or live at home during the day, but who require hospital care at night.

Half-way House is another partial hospitalization. This is useful for the patient who can benefit by living in the hospital and having the general association with patients and personnel and use of the activity areas, but who does not require full nursing and psychiatric care.

Home Service is another somewhat related intermediate service. The development of this has progressed throughout the year. Here we have the values involved in assisting the patient to remain in his own home. This assistance can consist either of visits to the home to help in crisis situations by nurse or social worker, or by placing nurses, licensed practical nurses, or attendant nurses in the home to offer care, companionship and support. Housekeepers are often particularly needed and such a service has been developed by our nursing department.

During 1958, there were twenty-seven home visits made to thirteen different patients by six different personnel, four by nurses, two by social workers. Housekeeping service was arranged for ten families.

Developments of this service are due to continue as we become better skilled in determining the indications for the service and in training personnel to provide it.

E. P. Anthony, Inc. Druggists

WILBUR E. JOHNSTON, Phar. D. RAYMOND E. JOHNSTON, B.S.

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Adolescents

In recognition of the need for treatment of adolescents, the twelve- to eighteen-year-old group, Butler Health Center has admitted patients of this age group, fifty-nine to out-patient, nineteen day servi e, and eighteen in-patient facilities. A total of ninety-six adolescents received service here during 1958.

Our treatment team, throughout the year, has achieved greater confidence in their skill with this age group. A doctor, nurse and social worker have become particularly interested and adept in meeting their special needs. Work with the families of the adolescent has been found essential and has increased.

We are impressed with the way the adolescents fitted into our total program and benefited from their association with patients of all ages.

Geriatrics

Last year we reported the demands on Butler to provide service for the older patients and the development of out-patient, day service, and temporary care programs for their use. There continued to be a constant demand for us to receive older patients for long-term care. In response to this, the upper floor of Goddard house was redecorated and opened on April 7, 1958, for this purpose.

Our experience during 1958 with these patients has been very gratifying, where we have seen the favorable results of thorough evaluation of the patient, of providing individualized care and treatment, of maintaining the patients' ties with the community.

Research

Research progressed along functional lines, closely integrated with the service for which it was designed.

The project from the Society for the Investigation of Human Ecology further clarified personality, social situation and drug action assessment. This was immediately applicable to the understanding of everyday patient, family and ward assessments.

Study of the effectiveness of intensive treatment of the acute psychosis by utilizing flexibly a variety of services, namely out-patient, day care, and shortterm in-patient service was provided by the United States Public Health Service project on Alternatives to Hospitalization. Findings led to the aforementioned discriminations as to the specific indications and values of each of these services: During the year, fifty-four patients who would conventionally have been hospitalized were provided effectively with alternative treatment. A further number who did require residential treatment had their concluded on next page



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CAPSULES—14 VITAMINS—11 MINERALS

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



hospital stay substantially shortened through the effectiveness of alternatives to residential treatment, a situation long prevalent in medicine and surgery in general hospitals, but far newer in psychiatric facilities.

We are obtaining evidence of the importance of continuity in the relationship between doctor and patient, as it appears that the patients treated by our psychiatric associates, before, during, and after hospitalization are having a remarkable short stay (30 days). The same is true for the patients who were in treatment in our out-patient department and continued in treatment by the same physician during and after their hospitalization.

Two projects provided service and research evaluation of the treatment given to patients with chronic, long-term mental disorders. These were "Interaction of Personnel and Chronic Psychotics" and "Evaluation of Combined Physical and Mental Rehabilitation." Of twelve patients severely disabled for several years prior to treatment here, all but two have shown at least moderate improvement; seven of these have been discharged within one year of the time their treatment at Butler was begun. In ten cases, a work program contributed significantly to improvement. In seven cases, extensive and continuous work with the family was a critical factor. Psychotherapy and/or drugs were

THE SEVENTEENTH ANNUAL

NEW ENGLAND POSTGRADUATE ASSEMBLY

November 3, 4 and 5, 1959 Statler Hilton, Boston, Mass.

PRACTICAL COURSES FOR PRACTICING PHYSICIANS

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Open to all physicians. Registration fee: \$10. For further information write: Dr. Joseph R. Frothingham, Chairman, New England Postgraduate Assembly, 22 The Fenway, Boston 15, Mass.

The Assembly is sponsored by the Massachusetts Medical Society in cooperation with the State Medical Societies and State Chapters of the American Academy of General Practice of Maine, New Hampshire, Vermont, Connecticut, Rhode Island and Massachusetts. important in several cases.

The work on rehabilitation done in conjunction with the State Division of Vocational Rehabilitation, facilitated by a grant from the Department of Health, Education and Welfare, is developing a model of Federal, State, and Private Agency collaboration. It provided assessment of 115 patients and a wide variety of five-day a week rehabilitation service for forty-nine patients, of whom 40% are currently employed. Here, as in the chronic interaction cases, the work program, group and/or individual psychotherapy, and social casework with families were the effective agents in re-engaging the patient in useful social and vocational life. In approximately 40% of the cases, the problem was that of combined physical and nervous disabilities and this program is providing a background of experience with this difficult group of cases.

SUMMARY

The first full calendar year of operation of Butler Health Center is reported. As Butler Health Center is the only private (tax free) mental hospital serving Rhode Island, the accomplishments of this year have general medical interest.

Source, age, sex and diagnosis of patients admitted are given. The distinctive services of outpatient, day hospital and in-patient service are described. Figures on duration of hospital stay, treatments used and recovery results are presented.

A brief summary of the research projects is included.

DETAILING IS ALSO PUBLIC RELATIONS

concluded from page 530

out for criticism, everyone else suffers.

I'd like to bring to your attention what public relations is. Public relations is the function of any group that evaluates public attitudes and identifies policies and procedures of any individual or group with the public interest and then executes activity to earn public understanding and acceptance. Fach of you is a potential missionary or a potential public relations man as well as a professional service representative.

In your future contacts try to give some consideration to the answers you offer—back them up with facts where you can. You may find your own answers being repeated to you in time from people you least suspect to be on your side. The end effect may be that the public attitudes generally will be changed.

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South Attleboro, Massachusetts

A modern non-profit hospital for the care and treatment of nervous and emotional disorders as well as long term geriatric problems.

Physical, neurological, psychlatric and psychological examinations.

Modern recognized psychiatric therapies.

A pleasant homelike atmosphere in a beautiful and conveniently located institution.

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WOMAN'S AUXILIARY

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RHODE ISLAND MEDICAL SOCIETY ANNUAL REPORTS . . . 1958-59

ANNUAL REPORT OF THE SECRETARY WOMAN'S AUXILIARY TO THE RHODE ISLAND MEDICAL SOCIETY

There have been three meetings during the past year.

The fall meeting was held October 8, 1958, at the White Horse Tavern, Newport, Rhode Island, with our Newport members acting as hostesses at a tea and social hour. Later a tour of the Breakers was enjoyed.

The midwinter dinner meeting was held January 1, 1959, in the Garden Room of the Providence Sheraton-Biltmore Hotel, with our husbands as guests. Mr. John Hanlon, sports writer for The Journal-Bulletin, told of his recent trip to Russia, emphasizing sports in that country.

The thirteenth annual convention is being held today, May 13, 1959, at the Ledgemont Country Club, Seekonk, Massachusetts.

Eight meetings of the Executive Board and Committee Chairmen have been held and one meeting with the board acting as Finance Committee.

Membership totals 508.

Proceedings of all meetings, reports and communications have been duly recorded and filed.

Respectfully submitted, Mrs. James P. O'Brien

KENT COUNTY AUXILIARY

The Kent County Auxiliary held luncheon meetings in October, January and April; two at the Warwick Country Club, and the third at the Holland House in Warwick. Each was preceded by a board meeting.

Mrs. Caroline Breen, director of volunteer workers at the Kent County Memorial Hospital, explained the requirements and duties of teen-aged girls enrolled in the volunteer program being carried out at the hospital.

A "Silent Auction" was held in conjunction with our midwinter meeting, an affair which was not only enjoyable but brought additional revenue to our treasury. We were honored to have our state auxiliary president, Mrs. Stanley D. Simon, as our guest at this time.

The May meeting was highlighted by the show-

ing of slides and an informative talk by John G, Smith, Ep.D., Superintendent of the Doctor Joseph H. Ladd School in Exeter, Rhode Island.

In December of each year a Christmas party is given to the employees of the Kent County Memorial Hospital by the hospital staff and trustees, and once again our auxiliary members wrapped the gifts and decorated the hospital cafeteria attractively for the occasion.

Our membership has increased by three during the year, with a present total of 52. Attendance at the luncheon meetings is better than 50%.

Provision has now been made in our by-laws so that the wives of Rhode Island Medical Society members who reside in Warwick, as well as the wives of Kent County Medical Society members, may become active members of our county auxiliary.

We look forward to a much larger attendance during this coming year and becoming better acquainted with one another.

MRS. HAROLD L. COLLOM, President

PAWTUCKET DISTRICT AUXILIARY

Because of the enthusiasm of approximately forty women and the untiring efforts of Mrs. Mark Yessian, the Woman's Auxiliary to the Pawtucket Medical Association was organized on February 26, 1959.

The annual meeting with election of officers and adoption of constitution and by-laws was held on March 18, 1959.

Although we were late in organizing, I feel we have accomplished a great deal. Several new members have been added to the state auxiliary and one of our objects is already evident—"to promote friendly relations and mutual understanding among physicians' families."

As first president, I feel extremely honored and shall do all in my power to promote the objectives of both the state and county auxiliaries.

MRS. LOUIS E. HANNA, President

WOONSOCKET DISTRICT AUXILIARY

The fall and winter luncheon meetings were held at the Uxbridge Inn. They were very enjoyable and the attendance was gratifying.

The November dinner get-together with our

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husbands at The Lochers in Milford was a tremendous success; everyone had a wonderful time.

George Kenny, chief public health educator for the state of Rhode Island, was guest speaker at the January meeting. Mr. Kenny's topic was A Day in the Life of a Public Health Educator. He said his job is to help people to understand and make use of the aids and the knowledge of doctors and scientists in order that citizens can lead healthier and more useful lives.

The next session, the biennial meeting, will be held April 28, at the Fireside, North Attleboro. Our guests will be Mrs. Stanley D. Simon, president, and Mrs. Mark A. Yessian, president-elect.

Close harmony and co-operation have made it a pleasure to work with all auxiliary members.

MRS. AURAY FONTAINE, President

COMMITTEE REPORTS

American Medical Education Foundation

The Woman's Auxiliary to the Rhode Island Medical Society has contributed forty-five dollars to A.M.E.F. through the use of five Sympathy cards, two In Appreciation cards and two A.M.E.F. corsages. It was also voted to donate one hundred dollars to the Foundation, bringing our total contribution to one hundred forty-five dollars.

The opportunity for all to help the medical schools is presented through the use of these special cards—the *Sympathy* card, the *In Appreciation* card and a new card for general use. Attractive Christmas cards are also available. The membership is urged to take advantage of this fine twofold plan to raise money for the American Medical Education Foundation.

MRS. ROBERT V. LEWIS, Chairman

Bulletin

Forty-six subscriptions to the bulletin have been received for the year 1958-59. The bulletin serves as a guide for auxiliary members, also as a source of reference. It is useful in helping to co-ordinate local auxiliary activities with those of other states and also with auxiliary activities on a national scale. Each year more members become aware of its value.

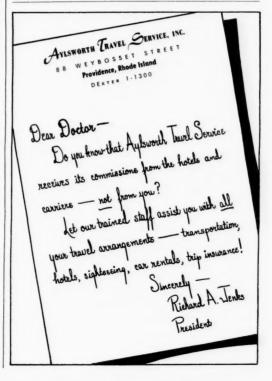
MRS. CHARLES W. CASHMAN, JR.

By-Laws

Two proposals made by the By-Laws Committee have met with success in 1959. One is the addition to the constitution and by-laws of the auxiliary to the Rhode Island Medical Society. Under Dues—Section 7. That is: "Any new member joining and paying dues after September 1st, will not be billed until a year from January."

A recommendation was also forwarded to Mrs. Mason G. Lawson, national By-Laws chairman, continued on page 544





New hope for fetal salvage

Delautin squitb hydroxyprogenterone carriate

improved progestational therapy

The results of administering Delalutin before the 12th week of gestation to 82 women with habitual abortion were reported recently by Reifenstein.¹ Every patient had experienced at least three consecutive abortions immediately preceding the treated pregnancy. More than 68% of these women were delivered successfully and uneventfully following Delalutin therapy.

Boschann,2 in a study of pregnancies with threatened abortion, found that:

37% of 73 pregnancies were carried to term without progestational therapy

64% of 42 pregnancies were salvaged by progesterone

83% of 73 pregnancies were salvaged by Delalutin

Eichner,³ found that with Delalutin fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved.

108 (76%) of 142 babies of this birth weight survived without progestational therapy.

16 (100%) of 16 babies of this birth weight survived with Delalutin therapy. A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation. Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active", well-tolerated and long-acting.

Delalutin offers these advantages over other progestational agents:

- · longer-acting and more sustained therapy
- more effective in producing and maintaining a completely matured secretory endometrium
- · no androgenic effect
- · more concentrated solution requires injection of less vehicle
- · unusually well-tolerated, even in large doses
- · requires fewer injections
- · low viscosity makes administration easier

DELALUTIN is also potent and safe therapy for: threatened abortion; postpartum after-pains; amenorrhea, primary and secondary; dysfunctional uterine bleeding not associated with genital malignancy; infertility with inadequate corpus luteum function; production of secretory endometrium and desquamation during estrogen therapy; premenstrual tension; dysmenorrhea; cyclomastopathy, mastodynia, adenosis and chronic cystic mastitis.

Administration and Dosage: Because of its low viscosity, Delalutin may be administered with a small gauge needle (deep intragluteal injection). Complete information on administration and dosage is supplied in the package insert.

Supply: Delalutin is available in vials of 2 and 10 cc., each cc. containing 125 mg. of hydroxyprogesterone caproate in sesame oil, and benzyl benzoate.

References: 1. Reifenstein, E. C., Jr.: Annals N. Y. Acad. Sci. 71:762 (July 30) 1958. 2. Boschann, H-W.: ibid., p. 727. 3. Eichner, E.: ibid., p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: Am. J. Obst. and Gyn. 76:279, 1958.



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WOMAN'S AUXILIARY REPORTS

continued from base 541

which has been acted upon favorably by that body. This is to allow the immediate past president of a state auxiliary to read her annual report (compiled by her and based on her year in office) if she so desires at the annual meeting after she goes out of office.

There has not been a Standing Committee but these members of the auxiliary attended the meeting at which two proposals were made: Mrs. Stanley D. Simon (president, Auxiliary Rhode Island Medical Society); past presidents, Mrs. Hannibal Hamlin, Mrs. Banice Feinberg, and Mrs. Herbert E. Harris; Mrs. Donald Larkin, treasurer; Mrs. Angelo Archetto, assistant treasurer, membership and Mrs. Francis L. McNelis, chairman.

MRS. FRANCIS L. McNelis, Chairman

Civil Defense

At the beginning of this year, Rhode Island Civil Defense Headquarters was contacted, extending the support of the Civil Defense Committee of the Woman's Auxiliary to the Rhode Island Medical Society. Its co-operation was offered in any project which they might desire to have it undertake and in case of any disaster or other emergency. No requests were made during the year.

Various Civil Defense materials were displayed to members of the auxiliary.

Mrs. Lee Sannella, Chairman

Historian

Material of interest to members of the auxiliary—reports of committees, newsletters and pictures—have been filed in the *scrapbook* which will be kept at the Rhode Island Medical Society on Francis Street, where it will be available for reference at all times.

MRS. GUY E. WELLS, Historian

Hospitality

The Hospitality Committee performed its services for the auxiliary at the three open meetings for the year 1958-59. These functions are described elsewhere in these reports under the heading of *Program*.

Our hospitality committee took on two additional projects this year. The Woman's Auxiliary sponsored a hospitality room on September 27 and 28 for the American Academy of Cerebral Palsy with the Hospitality Committee in charge. It was a delightful experience meeting and chatting with doctors' wives from all over the United States.

For our annual dance in October, our hospitality committee converted itself into a telephone squad to remind members of this annual affair. It has been a very enjoyable experience to serve as hospitality chairman, and I wish to thank the following members of my committee for their cooperation: Mrs. Etta Franklin; Mrs. Richard Haverly; Mrs. Ferdinand Forgiel; Mrs. Alphonse Cardi; Mrs. Arthur Hardy; and Mrs. Attilio Manganaro.

MRS. D. RICHARD BARONIAN, Chairman

Legislative

The medical profession has always been concerned with protecting and prolonging life. In 1900, only 3,000,000 Americans were over age sixty-five. Today there are 15,000,000. Since its beginning, more than a century ago, the American Medical Association has been sincerely concerned with the medical aspects of caring for the aged. Today society as a whole and the medical profession as a group are seeking a financial solution to the demands of medical and hospital care.

The House of Delegates of the American Medical Association in December, 1958, urged all physicians in this country to adjust their charges for medical services to the economic circumstances of persons over sixty-five years of age with reduced incomes and very modest resources. This action looks forward to a creation of insurance and prepayment plans at lower rates for some older people. Medicine, backed by the banks and insurance corporations, can do a magnificent job of taking the lead in this field. Otherwise, legislation, humanitarian but financially disastrous, could be the alternative.

Physicians themselves as they eventually reach and join these millions over age sixty-five are still seeking a tax respite. The Keogh-Simpson bill has again been approved by the House Ways and Means Committee. Under provisions of this bill the self-employed, including doctors, would be permitted to set aside 10% of gross, adjusted income up to \$2,500.00 to be paid into retirement plans. The lifetime maximum total would be \$50,000. Income at age sixty-five would be optional, but mandatory at age seventy. The question now is whether this bill will be passed by the Senate in the 86th Congress now in session.

On February 18, 1959, a bill titled: Health Benefits for the Aged Under Social Security, the Forand Bill, was introduced in the House of Representatives. Its purpose is to amend the present Social Security Act. It offers to provide hospitalization, nursing home services, and surgical services for an individual who is receiving or is entitled to social security benefits, and his dependents. The cost of up to sixty days of hospitalization in any twelvemonth period would be paid from the Federal Old-Age and Survivors' Trust Fund.

Mrs. Arthur Bradshaw, Chairman continued on page 546

AUGUST, 1959

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Wherever you go forget your telephone calls. We'll take them for you, day or night.

MEDICAL BUREAU of the **Providence Medical Association**

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WOMAN'S AUXILIARY REPORTS

continued from page 544

Newsletter

This year saw the fulfillment of the dreams of numerous past chairmen, with the change in our Newsletter from the cumbersome mimeographed sheets, to a four-page printed form. This has enabled us to include a greater amount of material as well as pictures (two in each of our three issues), which we hope have interested our readers.

We are grateful to our officers and chairmen for their co-operation in sending their copy promptly, and to Mr. Farrell's secretaries at the Medical Library for addressing and stamping the *Newsletters*. Copies have been sent to the editors of the other forty-eight states, and we have received many samples from those states.

Our December edition was mailed to all doctors' wives in the state, in the hope that it would stimulate interest in the auxiliary.

Without the guidance and assistance of our president, Mrs. Simon, and our president-elect, Mrs. Yessian, your editor would have been lost in her first endeavor in publication.

MRS. H. BICKFORD LANG, Editor

Scholarships for Nurses

The two Lillian W. Harris scholarships for \$150.00 each will be awarded this year to two student nurses; one from Pawtucket Memorial Hospital, and one from Newport Hospital. Indirectly we have been able to assist two more student nurses obtain scholarships; one from Rhode Island Hospital, and one from St. Joseph's Hospital.

On March 7 of this year I covered the North Atlantic Council of State Leagues for Nursing Careers Conferences at Hope High School. This discussion was primarily to interest high school students in nursing and to help them select the type of education that is best for them; as well as how to interest graduate nurses in administrative, supervisory, and teaching positions, and to help them get the academic and professional experiences to prepare them for these positions. The North Atlantic Council of State Leagues for Nursing and the New England Exploratory Conference are working regionally to meet our needs.

For the girls who are interested, but financially unable to enter the nursing profession, they should contact their director of nursing, so that some measure may be taken to assist them. Although 800,000 men and women are engaged in the nursing profession today, there still aren't enough. You may help by encouraging young women through your P.T.A., auxiliaries, and church groups. Scholarships may be obtained through the Department of Education, Veterans' Auxiliary, and many clubs.

MRS. NATHANIEL D. ROBINSON, Chairman

Parliamentarian

Perhaps there is no one in this group more qualified to observe the progress and steady growth of the Woman's Auxiliary to the Rhode Island Medical Society than I as your parliamentarian.

Not because I am smarter or older than anyone else but because I have held office continuously since our organization in 1947—first as your president, then as your parliamentarian.

It has been a great pleasure and a great honor to serve in both capacities.

As I have met with the various presidents, executive committees and committee chairmen each year at board meetings, I have marveled at the ability of each group to carry on.

Each president, her faithful officers and committees with their various personalities have contributed to the growth of their auxiliary and although each group has been different, all have worked diligently to improve the quality of the Society.

Each group, and the present group is no exception, has succeeded in making the Woman's Auxiliary to the Rhode Island Medical Society a very worthwhile organization and one I am very happy to be a member of.

MRS. HERBERT E. HARRIS, Chairman

Program

The three meetings planned by the Program Committee during the year 1958-59 have been varied and, I hope, interesting to the members who attended.

On October 8, during the Interim Meeting of the Rhode Island Medical Society, our Newport members were hostesses to about thirty-five auxiliary members who met at the historic White Horse Tavern for a delicious tea, followed by a tour of the Breakers. Dinner with the men at the Viking Hotel completed the day. The success of this meeting was due to the efforts of our Newport members, to whom I am most grateful.

The midwinter meeting on January 21 was the first meeting to which our husbands had been invited, and from all reports, they want to come again. In spite of a last-minute departure for Cuba by our speaker and the hasty substitution of another, about one hundred and twenty members and their husbands spent a delightful evening in the Garden Restaurant of the Sheraton-Biltmore Hotel. The dinner was delicious and John Hanlon, sports writer for The Providence Journal, entertained us with a fascinating account of his recent trip to Russia.

Safety will be the theme of the program on May 13, when the speaker will be Mr. Charles Shields, executive director of the Rhode Island Council on Highway Safety. Mr. Shields will demonstrate the alcometer by testing any willing victims. Mrs. Paul B. Rauchenbach, Eastern Regional vice-president

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Half a Lifetime . . .

When you need medical attention, you want — and are entitled to — the best medical service possible. That means, of course, competent physicians.

Under the system which produces our American doctors, you can ask for and get the services of one of the most highly-trained men in the world. You can be sure of his ability — protected by extremely thorough courses of training and by standards for the profession set by law.

Your doctor, specialist or surgeon has spent nearly half his expected lifetime preparing for the medical profession. He has directed his efforts toward medicine alone — through a maze of preparation.

There's no short cut to becoming a physician. College, medical school, and internship — plus further study if he specializes — tremendous amounts of time and money must be spent before the State of Rhode Island finally grants his license.

More, today's doctor is a combination of skilled physician plus a human being who has learned how to apply his skills to caring for other human beings.

Today, under the care of your physician, you can be sure you're receiving medical and surgical care more advanced and complete than ever before.

It is the aim of Physicians Service to make that care available with increasing benefits to all the people of Rhode Island who ask for it.

Better Health Care for More People Through

Physicians Service



WOMAN'S AUXILIARY REPORTS

continued from page 546

of the National Auxiliary to the American Medical Association, will be our guest of honor and bring greetings from National, and Doctor Francis B. Sargent will bring greetings from the Rhode Island Medical Society.

It has been a pleasure to work with our president, Marion Simon, who has been a constant source of help and advice and I am also grateful to the members of the Program Committee, Mrs. William J. Butler, Mrs. Warren W. Francis and Mrs. Normand E. Gauvin.

Mrs. John T. Barrett, Chairman

Recruitment

Our program for this year was twofold:

- Recruiting applicants to enter the paramedical fields,
- Awarding two scholarships of \$300.00 each to students in the fields of medical social work, and physiotherapy.

During the past year, the chairman was asked to review three films pertaining to paramedical careers.

The Physiotherapy Association is very anxious to have the co-operation of the auxiliary. There is a possibility that the association and the auxiliary will co-sponsor a film program and tea in the fall and thereby become better acquainted.

On March 7, at the North Atlantic Council of State Leagues for Nursing, the chairman and Mrs. Robinson represented the auxiliary. The emphasis was on the importance of the medical auxiliaries and the part they play in the recruitment programs throughout the country.

Our group is becoming well known and has had several requests to participate in the high schools' *Career Day*. In order to do our job well, however, we shall need many more qualified volunteer speakers from the membership.

The auxiliary and the Rhode Island Hospital

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Association have shared the cost in the purchase of the film, *Helping Hands for Julie*. This film is kept at the association office on Thayer Street, and is available to groups interested in promoting paramedical careers.

At present, we are in the process of organizing two future nurse clubs at Tolman and West High Schools in Pawtucket. We expect the clubs to be active in September.

Nursing-

Mrs. Alexander Jaworski, Chairman
Occupational Therapy—Mrs. Michael E. Scala
Physio-Therapy—Mrs. Charles Cashman
Medical Technician—Mrs. Charles Does
Medical Social Worker—

Mrs. Edward Damarjian Dietitian—Mrs. Francis L. McNelis

Safety

Although the Safety Committee did not present any special projects this year, we did attend meetings and offered our help to other organizations concerned with safety.

We attended the Governor's Conference on Highway Safety. At this conference, they discussed the driver education program. They also pointed out the need for making the public aware of traffic safety problems.

We were also asked to attend a meeting of the Lions Club who are planning a *Safety Day* on April 26. We extended our full co-operation and will assist them at that time by displaying in a store window, our posters depicting the hazards of drunken driving. We believe that this exhibit is excellent and are grateful for this opportunity to present it to the public.

At our annual meeting in May, we are going to have as guest speaker, Mr. Charles Shields, executive director of the Rhode Island Council on Highway Safety. He is going to demonstrate the alcometer machine which was previously shown to our committee at a Fall meeting of the Rhode Island Council on Highway Safety. It was a very interesting performance.

I regret that we were unable to present a few special projects on safety, but the opportunity did not arise. Yet, we tried to keep members informed on safety problems and will continue to do so in the future.

MRS. SUMNER RAPHAEL, Chairman

Today's Health

Our principal aim this year was to increase sales of Today's Health and to inform the public of its new format.

We began our attempts by selling subscriptions last May, at the annual meeting of the Rhode Island Medical Society. Posters were used for display concluded on page 551

CONSTRUCTION PROGRAM FOR MEDICAL, DENTAL, AND PUBLIC HEALTH SCHOOLS*

As Proposed by Congressman John E. Fogarty of Rhode Island to the Congress

MR. FOGARTY. Mr. Speaker, the cold, hard fact of the matter is that we as a nation are not doing what we should today to make sure that the schools of medicine, dentistry, public health, and other centers for education and research in the health field are adequate to meet the challenges and responsibilities they face, and all of us face, to-

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One hears a great deal about progress in the health field these days. It is true that we have made giant strides in some vitally important areas. We can be proud of what has been accomplished in the construction of hospital and other health facilities, in the improvements of medical and public health services, in medical research and the assurance of its future development. We can be pleased with the advances associated with the pharmaceutical and chemical industry, with the contributions of voluntary health agencies and foundations, and with the health-consciousness of the American people which finds expression in organization and action. We can be proud of these things, and pleased, but we cannot be content.

One of the great gaps in our present programs is in the absence of broad support for the health institutions as institutions, as contrasted with the support of some of their separate functions.

Specifically, I am concerned that we are at the breaking point in terms of the ability of these teaching institutions in the health field to keep up with our population growth and with the demands engendered by the rapid changes in medicine and public health.

This is not a new concern of mine, or of many people who are influential leaders in medicine and science today. A great many proposals have been made by Members of Congress, by the executive branch, and by interests outside of the Federal Government seeking ways to meet at least part of the all too evident need. There has been a great deal of discussion, but almost nothing in the way of action.

The legislation that I introduce today proposes that the Federal Government give greater assistance in the renovation and modernization of our present medical and related schools, and that at the same

*Reprinted from the Congressional Record—Appendix, May 7, 1959 issue, page A3863.

time we give encouragement and stimulus to the construction of new schools. It would build upon and extend the highly productive present program of matching grants to assist in the construction of health research facilities. Thus it sets no precedents and poses no philosophical problems, even among those who persist in the archaic belief that the use of Federal funds for the partial support of medical school activities is ipso facto a threat of Federal control and socialized medicine.

The thing my proposed legislation does is to give clear recognition to three things: First, that research and education are inseparable and often indistinguishable one from the other in a medical school environment; second, that adequate facilities are a basic requirement for medical, dental, and related research and education; and third, that the Federal Government shares in this responsibility to see that such facilities are provided commensurate with the national need.

In other construction programs, matching funds from Federal sources-such as the Hill-Burton hospital construction program and the health research facilities construction program-have been successful beyond all expectation in helping the States, communities, and institutions raise money from non-Federal sources. Such matching grants foster and encourage the putting of private and State money to effective use. Without such stimulus, the other funds might never be raised and the needed facilities might never be built.

It is proposed, therefore, that the Congress enact legislation which will modify and extend the Health Research Facilities Act, now in its third year and being very effectively administered by the Public Health Service, in the following major respects:

First. Changes the title of the Act to include facilities for education as well as research in the health field

Second. Extend the authorized duration of the program to 5 years, beginning with the fiscal year 1960.

Third. Increase the annual authorized availability of funds from the \$30 million now provided for research facilities only to a total of \$50 million annually for both research and educational facili-

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ties, thus making \$250 million available for presently established schools of medicine, dentistry, public health, and osteopathy over a 5-year period.

Fourth. In addition, provides \$100 million with more favorable matching terms for the construction of new schools in the above fields, including an initial or starting grant of up to \$25,000 for planning purposes.

Fifth. Expands by 50 percent the membership of the Council that reviews and makes final recommendations on these grants to include educational as well as research representation.

There is great urgency associated with the enactment of such legislation.

One reason lies in the population changes that will occur during the next decade. Our total population will grow from 175 million to 220 million by 1970. Nearly three-quarters of this increase will be among persons over 65 and under 20 years of age, when requirements for medical care—which means, primarily, more physicians—are most frequent.

Moreover, medical practice continues to be more complex and the task of educating physicians correspondingly so. It is a task that cannot be carried out effectively in the absence of a fully adequate physical plant

Then, too, medical and related schools carry an increasing responsibility to pioneer in the provision of medical and community health services. They carry out the largest component of the Nation's research in the health field. And they produce an increasingly important segment of the Nation's total manpower for research in the health sciences.

For these and a host of other reasons that are self-evident, it is abundantly clear that these schools are a national resource. Their ability to meet the challenges of tomorrow is a matter of deep public concern. It is our responsibility to give voice and substance to that concern in a program of action—a program that will reflect the public interest.

The medical schools' need for assistance in the construction of new and the renovation of existing facilities has been amply demonstrated and often reiterated in studies and reports by such eminent groups as the Association of American Medical Colleges, the Council on Medical Education of the American Medical Association, the Committee of Consultants to the Secretary of Health, Education, and Welfare, this House itself, and others whose interest, insight, and objectivity are beyond question. They do not pretend, nor do I, that matching grants for construction purposes will meet all of the future needs of the medical schools. Ultimately, of course, some way must be found to meet the needs of such institutions for general operating funds. The institutions themselves, the Congress, and the people are not able to see this issue clearly today. It will take time, and study, and debate for the issue concluded on next bage

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WOMAN'S AUXILIARY REPORTS

concluded from page 548

purposes and there were individual solicitations by members of the committee.

During the year, subscriptions were sold at every meeting of the auxiliary and an effort was made to emphasize the need of Today's Health, not only in the doctor's office, but in other areas—the non-professional home, beauty shops, schools, libraries, etc.

Reminders were routinely sent to those subscribers requiring renewal of Today's Health.

An article was written for publication in the *Newsletter* of the Woman's Auxiliary to the Rhode Island Medical Society. Also, advertisements or reminders were publicized in each edition.

Despite our efforts to sell more subscriptions, our sales have increased from thirteen last year to only forty-three this year. We were commended by Mrs. John M. Chenault, national Today's Health chairman for our good work, but were disappointed that we reached only 8% of our national quota.

The recommendations listed below are submitted for the following year:

1. Select a representative from each of our auxiliaries in the state: Kent County, Newport, Pawtucket, and Woonsocket—who will be directly responsible for sales in their respective area. Only a few subscriptions have been received from Woonsocket and Pawtucket. None from the other auxiliaries.

2. Continue the advertisements in the *Newsletter* of the Woman's Auxiliary to the Rhode Island Medical Society. Also include chairman's name and address and cost of subscription.

3. In the fall, preferably, a letter from the president or Today's Health chairman, should be sent to all members of the auxiliary requesting them to buy at least one subscription to Today's Health.

4. Advertise in the RHODE ISLAND MEDICAL JOURNAL.

MRS. MICHAEL E. SCALA, Chairman

Community Service

During the past few months, we have done a survey to determine how many volunteer hours are spent by individual members in outside activities such as scouting, P.T.A., and League of Women Voters. The response to this twice repeated survey was small but on the basis of those responses we did receive, it was determined that an individual member of the auxiliary was giving an average of twenty-five volunteer hours a month to organizations, other than the medical auxiliary.

MRS. HERBERT FANGER, Chairman

Mental Health

We were encouraged at the beginning of this year to use our membership in other organizations to further spread the idea of good mental health. With this in mind, programs were planned by our committee on juvenile problems and on better education.

Since the problem of high school marriage has become so acute, National Headquarters would like *Milestones to Marriage* distributed to as many high school seniors as possible. These have been ordered and will be sent out as soon as possible.

The auxiliary program at Charles V. Chapin Hospital is under way and two members of our auxiliary will start on Tuesday, May 12.

MRS. E. ALLAN CASEY, Chairman

Ways and Means

Our annual fund raising and dinner dance was held Saturday evening, October 18, at the Metacomet Country Club. The sum of \$1,031 was realized as profit and has been allocated to the Doctors' Benevolence Fund, AMEF, Paramedical Careers Scholarships and Nurses' Scholarships.

As chairman of this committee I have tried to impress the members with the fact this is our only money raising project and should be supported by all.

Again, thank you to a most enthusiastic committee and to all who contributed to make our sixth annual dinner dance a social and financial success.

Mrs. Louis E. Hanna, Chairman

CONSTRUCTION PROGRAM FOR MEDICAL, DENTAL AND PUBLIC HEALTH SCHOOLS

concluded from preceding page

to be clarified, and it must be clarified before it can be resolved. We do know, however, that the health institutions of today are inadequately housed and that we will need additional institutions in years to come. Let us, then, move ahead one step further in our national effort to maintain and protect one of our most precious national resources, our health, by making it possible for the physical plants of the schools to be more adequate for tomorrow's needs.

Check the Date Now

Wednesday, September 23

Interim Meeting at Quonset

POSTGRADUATE DIVISION
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announces a postgraduate course

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INFECTIOUS DISEASE Dr. Louis Weinstein,
Chairman

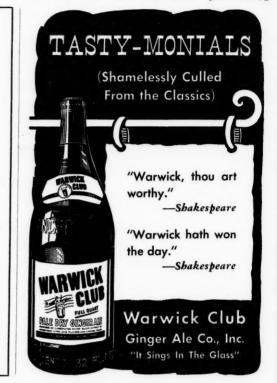
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